Canada Mortgage and Housing Corporation

Société canadienne d'hypothèques et de logement

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RESIDENTIAL RENOVATION DATA

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by

Clayton Research Associates

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SOMMAIRE

Depuis les quinze dernières années, la rénovation occupe une place de plus en plus importante dans l'industrie de la construction résidentielle. Les dépenses reliées à la rénovation ont augmenté, tant en chiffre réels qu'en proportion des dépenses totales effectuées pour la construction résidentielle, ce qui a suscité des demandes pour la cueillette de nouvelles données et pour l'amélioration des données existantes dans ce domaine. Ces demandes ont permis de réaliser des progrès considérables: en particulier, l'EDF et l'ERNEM de Statistique Canada, l'enquête HOMES du Groupe de recherche pour l'environnement Ltée, ainsi que l'Enquête nationale sur l'habitation et l'Enquête nationale sur l'industrie de la rénovation résidentielle de la SCHL ont permis d'accroître sensiblement l'information sur la rénovation.

Malgré ces progrès, il reste encore certains aspects de la rénovation pour lesquels les données existantes pourraient être grandement améliorées. La SCHL a donc chargé Clayton Research de produire une étude sur les séries de données existantes en matière de rénovation résidentielle au Canada et de cerner les aspects qui nécessiteraient une cueillette des données supplémentaires.

Voici un aperçu des améliorations les plus importantes qui pourraient être apportées aux six catégories de données sur la rénovation relevées dans cette étude:

- Travaux de rénovation - Il serait très utile que Statistique Canada publie un bulletin traitant exclusivement des données existantes sur la rénovation. En outre, la précision des données (particulièrement pour la rénovation des logements locatifs) et la série statistique gagneraient à être améliorées, notamment, dans le second cas, au moyen d'une tabulation recoupée des données par genre de travaux effectués (les réparations par opposition aux améliorations) et par type de logements.

  Ces améliorations pourraient aussi inclure de meilleurs déflateurs pour le prix des travaux de rénovation et des données sur les conversions et les reconversions.

- Types de rénovations - On a réalisé des progrès importants dans cette catégorie au cours des dernières années. Cependant, une des principales sources de données, l'EDF de Statistique Canada, se présente sous une forme qui la rend difficile à interpréter. Il serait donc utile d'en modifier la présentation. On pourrait également recueillir des données sur les composantes des logements qui fond l'objet des rénovations ainsi que sur les rénovations importantes.

- Caractéristiques des logements rénovés et de leurs occupants - L'EDF et l'enquête HOMES, de même que l'Etude nationale sur l'habitation de la SCHL, ont considérablement amélioré les données existantes dans cette catégorie. Aucune autre mesure ne semble nécessaire, sauf peut-être une cueillette de données sur les caractéristiques des logements ayant subi des rénovations importantes et de leurs occupants.

- Etat du parc de logements - Encore une fois, il y eu des progrès considérables dans cette catégorie de données, particulièrement à la suite de l'Etude nationale sur l'habitation de la SCHL. Il serait utile entre autres d'améliorer les données sur le parc de tours d'habitation et sur les logements situés dans les régions non urbaines.

- Besoins en rénovation et conséquences de celle-ci - Le modèle des entrées-sorties de Statistique Canada fournirait des données extrêmement utiles en matière de rénovation s'il comportait un mécanisme d'entrée distincte pour la rénovation, comme c'est le cas aux Etats-Unis.

- Caractéristiques de l'industrie de la rénovation - On pourrait obtenir des données supplémentaires sur les caractéristiques des entreprises oeuvrant dans le secteur de la rénovation en modifiant le Recensement de la construction de Statistique Canada de façon à considérer la rénovation comme un secteur distinct. Une enquête similaire à celle qui a été entreprise par la NAHB aux Etats-Unis se révélerait également utile.

EXECUTIVE SUMMARY

Renovations have become an increasingly important part of the residential construction industry over the past 15 years. As the volume of renovation spending has increased both in real terms and as a proportion of total residential construction spending, there have been demands for new and improved data on renovations. These demands have resulted in significant advances in the data - in particular, the Statistics Canada FAMEX and HFE surveys, the HOMES Survey by Environics Research Group, and the National Housing Study and National Residential Renovation Industry Survey by CMHC, have provided important contributions to the information available on renovations.

In spite of these advances, there are still areas in which the data available could be greatly improved. To assist in identifying these remaining gaps, Clayton Research was commissioned by CMHC to prepare a review of the existing data series on residential renovation in Canada and to identify areas where additional data would be useful.

Highlights of the most important areas of potential improvement in each of the six types of renovation data identified in this study are presented below:

- Renovation activity data - presentation of the available data from Statistics Canada in a bulletin specifically devoted to renovation data would be very useful. Also, both the accuracy (particularly for rental renovation work) and the array of data could be usefully improved. Improvements to the array of information available on renovation activity could include cross-tabulations of data by type of activity (repairs versus improvements) and type of dwelling.

  Other important improvements to the activity data would include improved price deflators for renovation work and information on conversions and deconversions.

- Types of renovation work - there has been a great improvement in the data available in this area in recent years. One of the main new data sources, however, the Statistics Canada FAMEX Survey, is not presented in a format which the user can readily interpret; improved presentation of these data would be very useful. Further potential improvements include information on the part of the dwelling on which work is done and information on major renovations.

- Characteristics of renovated dwellings and occupants - the FAMEX and HOMES surveys and the CMHC National Housing Study have provided a great deal of information in this area. There

are no obvious further improvements except perhaps information on the characteristics of dwellings and occupants of major renovations.

- State of repair of the dwelling stock - there have been great improvements in the data available in this area, particularly as a result of the CMHC National Housing Study. Additional useful information includes better data on the high-rise stock and on dwellings in non-urban areas.

- Requirements and effects of renovation - the Statistics Canada input-output model would provide extremely useful data on renovation if there were a distinct renovation input structure as is the case in the United States.

- Renovation industry characteristics - further useful information on the characteristics of firms in the renovation sector could be obtained from revisions to the Statistics Canada Census of Construction to identify renovations as a distinct sector. A survey such as that undertaken by the NAHB in the U.S. would also provide useful information.

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INTRODUCTION

Renovations have become an increasingly important part of the residential construction industry in Canada over the past 15 years. In 1971, spending on renovations to residential buildings accounted for 30 percent of total residential construction spending in the country; by the early 1980s, this proportion had risen to 49 percent. In recent years, with the boom in new residential construction in central Canada, the share of total spending accruing to renovation work has declined somewhat. However, projections indicate continued growth for renovation work in the future while spending on new construction is expected to decline.

As the volume of renovation spending has increased both in real terms and as a proportion of total residential construction spending, there have been increasing complaints among policy makers, researchers and those involved in renovation regarding the adequacy of the available data on this important activity. Over the past several years, however, there have been considerable advances in the data which are available on renovation. The recent advances include:

- The changes to the Statistics Canada Family Expenditure (FAMEX) and Household Facilities and Equipment (HFE) surveys;
- The HOMES Survey conducted by Environics Research Group; and
- The National Housing Study and National Residential Renovation Industry Survey conducted by CMHC.

All of these have provided important new information on renovations and have contributed to filling some of the gaps in the information which had become increasingly apparent.

In spite of these advances, there are still many areas in which the data available could be greatly improved. To assist in identifying these remaining gaps, Clayton Research Associates was commissioned by CMHC to prepare a review of the existing data series on residential renovation in Canada and to identify areas where additional data would be useful. This report presents the results of the assignment. It was prepared following a series of consultations with a selection of users and producers of data on renovation as well as a review of data available in other countries.

To provide a framework for the analysis, the types of renovation data have been grouped into the following six broad areas:

- Overall renovation activity - estimates of the volume of renovation spending disaggregated into broad types of work such as repairs versus improvements and types and tenure of dwellings;

- Types of renovation work - further disaggregation of the estimates of renovation activity into information on the distribution of spending on jobs of different sizes, the parts of dwellings on which renovation work is being done and whether the work is undertaken by the owner of the property (DIY or do-it-yourself) or by a contractor;

- Characteristics of renovated dwellings and occupants - the types, values, ages, locations and state of repair of dwellings being renovated and the ages, incomes, family types and motivations of owners of dwellings being renovated;

- State of repair of the dwelling stock - an assessment of the size of the dwelling stock in need of repair and the characteristics of the dwellings and their occupants;

- Requirements and effects of renovation - the volumes and types of labour and materials required for renovation work on dwellings; and

- Renovation industry characteristics - the types of firms that undertake renovation work including information such as firm size, financial performance, length of time in the industry and degree of specialization.

In addition to this introductory section, the report consists of a brief review of the definitions of terms used in describing renovation. This is followed by an examination of the data available in Canada for each of the six types of renovation data and an assessment of improvements that could usefully be made to the data.

WHAT IS RENOVATION?

Renovation can mean different things to different people. In most common usage, and the meaning adopted for use in this report, renovation covers the full spectrum of construction activities on existing buildings and their surrounding property. These construction activities can range from minor work, such as painting and small maintenance jobs, through the upgrading of a part of a building to meet modern standards, such as remodelling a kitchen or bathroom, to the erection of a major addition to an existing building. The work can be done either by the owner of the property (described as do-it-yourself or DIY), or by a contractor hired to undertake the work, or by a combination of the two.

The focus of this report is on residential renovation. As renovation work on non-residential buildings is not covered here, the more general term "renovation" is used throughout this report to describe residential renovation.

Renovation can be theoretically disaggregated into a wide variety of component parts; however, the nature of renovation work is such that there is no reliable statistical distinction between many of the types of activities which are included. Terms such as rehabilitation, conservation, maintenance, repair, renewal, retrofitting, remodelling and replacement all describe activities which overlap one another in varying degrees and generally describe some aspect of renovation work.

This report deals with all types of renovations to residential properties. In many cases the data relate to renovations of all types, while in others they relate to a disaggregation of overall renovations into categories which are not always consistent. A review of the definitions of the categories used in the Statistics Canada data which are reviewed in this report is provided below.

The most common disaggregation of renovation spending is between repairs and improvements. These are defined by Statistics Canada (in Construction in Canada, Catalogue 64-201) as:

- Repairs - minor renovations and alterations made to maintain the operating efficiency of the existing structures.
- Improvements - additions and major renovations, conversions and alterations where either a structural change takes place or the life of an existing asset is extended beyond its normal life expectancy.

The Statistics Canada Family Expenditure (FAMEX) Survey (presented in Catalogue 62-555, Family Expenditure in Canada and on microfiche in a more detailed form) contains renovation data on a slightly different and greater level of disaggregation. Four categories of renovation are included in the FAMEX Survey:

- Maintenance, repairs and replacements - work on an existing structure or piece of equipment to keep it in good working condition and appearance so as to maintain it in "as new" a condition as possible. This category also includes repairs done to broken, damaged or malfunctioning components of the structure or equipment. In addition, replacement of existing equipment or fixtures is included here (such replacements are not included in the repairs definition used in Construction in Canada).

- Additions - construction of structural extensions, enclosures and additional facilities on the residential property such as garages, car ports, swimming pools, fences, patios, driveways and landscaping.

- Renovations and alterations - work intended to upgrade the property to acceptable building or living standards, to rearrange the interior space or to modernize existing facilities.

- New installations - the installation of equipment which did not previously exist on the property, or which was installed as an addition to the equipment on the property.

OVERALL RENOVATION ACTIVITY

This section examines data pertaining to overall renovation activity, that is, the volume of renovation spending disaggregated into broad types of work, such as repairs versus improvements, and types and tenure of dwellings.

EXISTING CANADIAN DATA

The main source of data on overall renovation activity are contained in estimates of construction expenditures prepared by the Capital Expenditures Section of Statistics Canada. In addition, Environics Research Group prepares estimates of total homeowner renovation spending as part of the annual HOMES Survey.

Statistics Canada Estimates

The Capital Expenditures Section of Statistics Canada prepares estimates of renovation spending based on data available from the Family Expenditure Survey and the Building Permits Survey. These estimates are incorporated into two separate publications (Construction in Canada and National Income and Expenditure Accounts), as well as in unpublished data. In addition, Building Permits' presents data on building permits issued for renovations.

- Construction in Canada (Catalogue 64-201) contains estimates of the annual volume of expenditures on major types of construction in Canada (see Appendix A-1). Residential renovation spending is not identified separately in the published data. Estimates of expenditures on repairs are presented, but improvements are lumped together with expenditures on mobile homes and cottages and acquisition costs into a category termed "other" residential expenditures ("other" being total residential spending less repairs and spending on new construction of single-detached, semi-detached, duplex, row and apartment units).

- National Income and Expenditure Accounts (Catalogue 13-001) presents alterations and improvements data (not including conversions) disaggregated separately from total residential construction spending. These data are presented on a quarterly basis at the Canada level (see Appendix A-2). Repair data are not available in this publication as repair expenditures are not considered to be investments in fixed capital. The National Accounts data are presented in both constant 1981 and current dollars. These data are the only source of information available on price deflators for renovation spending.

- Unpublished data from Statistics Canada present a more complete disaggregation of the data presented in Construction in Canada. One series, "Value of Renovation Activity (Repairs, Improvements, Conversions) as a Proportion of Residential Construction" (see Appendix A-3) separately identifies repairs, improvements and conversions which together comprise total renovations to existing residential properties. In addition, estimates are available of the breakdowns of both repair and improvement expenditures for owner-occupied dwellings and rental dwellings. All of these data are available on an annual basis for Canada and the provinces. The improvements data are also available on a quarterly basis and are disaggregated into single versus multiple dwelling units.

- Building Permits (Catalogue 64-001) presents the value of building permits issued for improvements and conversions to residential buildings (see Appendix A-4). The building permit values for improvements are generally well below the estimates of actual expenditures on improvements presented in the other Statistics Canada data reviewed previously.

Environics HOMES Estimates

Environics Research Group conducts an annual survey of households which, among other things, asks homeowners about their spending on renovations. The HOMES Survey is geared mostly towards providing details about the types of activities undertaken by renovating homeowners in major centres; however, estimates of total spending on homeowner renovations are released by Environics (see Appendix A-5 for a sample). The results of the survey are available by subscription.

DESIRABLE IMPROVEMENTS TO THE DATA

There are several areas in which the existing data, and its presentation, could be improved upon:

- A renovation bulletin - the consolidation of the renovation activity data into one publication, such as is done in the U.S. Department of Commerce quarterly bulletin, Expenditures for Residential Upkeep and Improvements, would be extremely useful. The U.S. publication contains estimates of the volumes of expenditures on maintenance and repairs, as well as a disaggregation of spending on improvements.

At a minimum, the data presented by Statistics Canada in Construction in Canada should recognize the importance of the renovation sector and present renovation data in a form in which it is readily identifiable. Currently, this is not the case.

- Improvement to the array of information available - the U.S. publication cited above provides a good guide as to the types of information which would be useful (see Appendix A-6). Initial improvements would be:

  - a disaggregation of total spending as follows;
    - maintenance and repairs
    - improvements
      - additions and alterations
        - to structures
        - to property outside of structures
      - major replacements

  - each of these presented separately for;
    - owner-occupied properties
      - one-unit properties
    - rental properties

  Much of this information is already available within Statistics Canada but is not published in a comprehensive form. Two particularly useful improvements to the Canadian data would be: a) the disaggregation of data into work done on structures versus work on property outside structures; and b) the disaggregation of spending by owner/renter as well as for one-unit properties versus multiple unit properties. In view of the current interest in the state of repair of the high-rise rental stock, consideration could be given to the preparation of estimates of expenditures on these buildings.

- Accuracy - the current estimates of renovation spending on rental dwellings need to be examined. It is likely that the accuracy of these estimates could be improved - particularly with the additional tenant and landlord renovation expenditure information now available from the CMHC National Housing Study. In the U.S., one-third of estimated renovation spending is on the rental stock; in Canada it is estimated to be less than 20 percent.

  Also, the substantial changes in the estimates of renovation spending due to the revisions to the National Accounts in 1986 have made users wary of the reliability of the data. The recent slowdown in renovation spending (according to official data) is very difficult to explain in light of current economic and housing market conditions in Canada; an examination as to the reasons behind the apparent slowdown would appear to be warranted. This is particularly true at present when the only alternative

source of data on the volume of renovation spending (the Environics HOMES Survey) is indicating continued strength in spending.

- Price deflators - at present, the only source of price deflators on renovation spending are for improvements spending at the Canada level from the National Accounts. Analysis of the trend in renovation spending over time requires further price deflators for regions as well as for renovation activity as whole - including repairs as well as improvements.

- Timeliness - the publication dates for Construction in Canada are such that the data presented are seldom the latest available.

- Frequency - the U.S. renovation activity data are presented quarterly, however, it is not considered likely that most Canadian users would require such a frequency. The effort which would be required to produce quarterly estimates would be better directed towards other improvements in the data.

- Data for major centres - at present, spending estimates are produced for Canada and the provinces. Activity in major markets such as Toronto, Montreal and Vancouver is not available, but would be a major improvemen for users of the statistics. The Environics HOMES Survey produces data for the major centres but these data are not consistent with the Statistics Canada estimates.

- Conversions and deconversions - with high housing costs and tight rental markets, there is an increasing interest in more intensive use of the existing housing stock in Canada. Estimates of the volume of building permits issued for conversions are contained in Building Permits. However, these data relate only to work valued above $25,000 (soon to be revised to $50,000); this is well above the level required to convert most dwellings. Therefore, the data significantly understate the volume of conversions and are virtually unusable as a source of data in this area. This could be rectified by eliminating the value limit for reporting the addition of one or more dwellings; it would also be extremely useful to add information regarding the loss of dwellings (deconversions) through renovations.

- Projections of renovation spending - many users, such as manufacturers of building materials, require estimates of the future volume of renovation spending for their business activities. At present, there are scattered projections of spending on a global basis (e.g. those contained in Clayton Research Associates, Medium and Long Term Projections of Housing Requirements in Canada, prepared for CMHC in 1987) but no comprehensive, regular projections are available.

TYPES OF RENOVATION WORK

This section examines data pertaining to types of renovation activity, including information on the distribution of spending on jobs of different sizes, the parts of dwellings on which renovation work is being done and whether the work is undertaken by the owner of the property or by a contractor.

EXISTING CANADIAN DATA

The main sources of data on types of renovation activity are Statistics Canada's Family Expenditure Survey and Shelter Cost Survey, Environics HOMES survey and Canada Mortgage and Housing Corporation's 1986 National Housing Study.

Family Expenditure Survey

Statistics Canada collects, as part of its Family Expenditure Survey, detailed information on the types of renovation work undertaken by homeowners and the amount spent on each. These data are published in Family Expenditure in Canada on an aggregated basis - estimates are provided only for the incidence and average spending on maintenance, repairs and replacement (for DIY and contract separately) and additions, renovations and new installations (see Appendix A-7). However, more detailed information on types of work being undertaken and whether it is DIY or contract is available on microfiche (see Appendix A-8).

It is also possible to obtain special tabulations from the FAMEX data base of the distribution of homeowners by amount of expenditures on various types of renovations and total renovation spending; these data allow different "sizes" of renovators to be determined and, therefore, the types of work done by large versus small renovators. An example of the types of information that can be obtained from special tabulations of the FAMEX data base is contained in Clayton Research Associates, An Examination of the 1982 Family Expenditure Survey Renovation Activity Data, Canada and Ontario, prepared for the Ontario Ministry of Housing in 1985.

During the 1980s, three FAMEX Surveys have been conducted in Canada; 1982, 1984 and 1986.

Shelter Cost Survey

In response to the growing demand for renovation data, Statistics Canada has commenced the Shelter Cost Survey to provide the same

information as that provided in the FAMEX Survey for the years in which the FAMEX Survey is not undertaken. The first Shelter Cost Survey was conducted in 1988 with respect to expenditures in 1987; it will be released in the spring of 1989. The next survey, to be conducted in 1989 with respect to expenditures in 1988, is to be called the Housing Repair and Renovation Survey.

Environics HOMES Survey

The HOMES survey provides subscribers with information on the proportion of homeowners undertaking various types of renovation work, the average expenditure and whether the work was done by the homeowner or a contractor. The types of renovation work covered separately in the HOMES survey are shown in Appendix A-5; since the data are sold on a subscription basis, samples are not readily available. Examples of the types of information available from HOMES are presented in Clayton Research Associates, The Nature of the Residential Renovation Market in Ontario, prepared for the Ontario Ministry of Housing in 1987.

CMHC National Housing Study

The National Housing Study undertaken by CMHC in 1986 collected information on the types of renovation work undertaken in 1985 not only by homeowners (as in the FAMEX and HOMES data), but also by landlords and tenants. The information gathered includes the types of work done (see Appendix A-9) and who did the work. The total amount spent on renovations was also collected (see Appendix A-10) but the disaggregation of the amounts spent on each type of work was not.

DESIRABLE IMPROVEMENTS TO THE DATA

Information on types of renovation work is one of the data areas in which there has been a great improvement in the data available over the last several years. The combination of FAMEX, HOMES and the National Housing Survey has provided a great deal of information where previously there was relatively little. There is, however, considerable room for improvement:

- Expenditures by type of renovation - there are two ways to disaggregate renovation work by type:

- nature of the work - repairs versus improvements (improvements can be further disaggregated into alterations, additions and new installations; and

- part of the dwelling - e.g. heating equipment, plumbing, roofing, painting interior walls, etc.

None of the existing sources provides renovation spending information in the type of matrix that combines these two means of disaggregation into a meaningful presentation of expenditures on renovations by type of work. This type of presentation is available in the U.S. Department of Commerce bulletin Residential Alterations and Repairs (see Appendix A-11).

- Data presentation - to be useful, the information collected needs to be presented in a form which the user can readily interpret. One of the most useful potential sources of data on types of work is the FAMEX Survey (and its derivative the Shelter Cost Survey); however, the data from these surveys are generally not presented in a manner which is easily interpreted by users interested in types of renovation work. The special study prepared by Clayton Research in 1985 (An Examination of 1982 Family Expenditure Survey Renovation Activity Data, Canada and Ontario) was specifically intended to rework the FAMEX data into a more usable form.

  The FAMEX Survey has a relatively large sample size: FAMEX covered 6,000 homeowners in 1986 and larger samples are possible in the future. In comparision, the HOMES survey covered 2,100 homeowners while the special National Housing Survey covered 9,000 homeowners. Redesign of the tabulations produced by the FAMEX/Shelter Cost Surveys could provide valuable information on the types of renovation work from this largely untapped data source.

- Major versus minor renovations - most renovation jobs are relatively small; however, many users are interested in the types of work undertaken in large renovations (say valued at $20,000 or more). Differentiation between repairs and improvements does not provide the information required since either of these can be major or minor types of jobs.

  Information on major renovations requires presentation of data on the sub-sample representing only those on which major work has been done. Given the relatively small proportion of these, it is unlikely that any general survey such as FAMEX or HOMES would have a sufficient sample size to provide reliable results. Therefore, a special survey of major renovations would be required to collect this type of information. Such a survey could use building permits as the means to obtain the sample.

CHARACTERISTICS OF RENOVATED DWELLINGS AND OCCUPANTS

This section examines data pertaining to characteristics of dwellings being renovated (i.e., types, values, ages, locations and state of repair of dwellings) as well as the characteristics of the occupants of these dwellings (i.e., incomes, family types and motivations for commencing work).

EXISTING CANADIAN DATA

There are three main sources of information on the characteristics of renovated dwellings and their occupants; the Statistics Canada Family Expenditure Survey (and the new Shelter Cost Survey), the Environics HOMES Survey and the CMHC National Housing Study.

Family Expenditure Survey

As noted in the previous section, the FAMEX Survey collects data on the incidence of renovation and the amounts spent among homeowners. The survey also collects data on the characteristics of the owners and their dwellings. Through cross-tabulations of the data, information is available on the type of household, age of head, family income, number of income earners, ownership status (with or without a mortgage), dwelling type and year the dwelling was built for owners undertaking renovation work. Examples of the types of data that can be obtained from these special tabulations of the FAMEX data base are contained in Clayton Research Associates, An Examination of 1982 Family Expenditure Renovation Activity Data, Canada and Ontario and The Nature of the Residential Renovation Market in Ontario, prepared for the Ontario Ministry of Housing in 1985 and 1987, respectively.

Shelter Cost Survey

The 1987 Statistics Canada Shelter Cost Survey will provide similar information to that available from the FAMEX Survey.

Environics HOMES Survey

The HOMES Survey collects information on household and housing characteristics of homeowners and, through special tabulations, it is possible to cross-reference this information with the incidence

of renovation spending. Examples of the types of information which can be obtained from the HOMES data are presented in Clayton Research Associates, Residential Repair and Renovation in Alberta, prepared for the Alberta Home Builders' Association in 1986. They include: age of head, family type, income, mortgage payments, degree of satisfaction with home, length of residence, plans to move, dwelling type, new/resale home when purchased, age of dwelling and location within the city.

CMHC National Housing Study

The National Housing Study collected characteristics information for both homeowners and landlords and these data are presented in Residential Renovation Overview, Program Evaluation Report, prepared by CMHC in 1988 (see Appendix A-12). The types of data available from the National Housing Study include: number of rooms, bedrooms, bathrooms, length of occupancy, type of heating system and fuel, age of dwelling, need for repairs to dwelling, problems with dwelling in the recent past, conditions of various parts of the dwelling, plans to move, neighbourhood quality, household size, age of head, physical disabilities, formal education, occupation, employment status, mortgage payments, property taxes and utility payments, dwelling value, household income and reasons for undertaking (or not undertaking) renovation work in the past year. For rental dwellings, similar property information was collected as well as information on landlord characteristics.

DESIRABLE IMPROVEMENTS TO THE DATA

As with the data on the types of renovation work, there has been a significant improvement in recent years in the data available on the characteristics of renovated dwellings and occupants. The data available from the FAMEX Survey, the HOMES survey and especially the National Housing Study have provided most of the types of information which would be useful in this area.

There are no obvious major improvements which would be useful in the data; however, if a survey of major renovators is undertaken (as suggested in the previous section), it would be useful to obtain the characteristics of dwellings and occupants of these as well.

STATE OF REPAIR OF THE DWELLING STOCK

This section examines data on the size of the dwelling stock which is in need of repair, the problems with these dwellings and the characteristics of the dwellings and their occupants.

EXISTING CANADIAN DATA

The three main sources of data in this area are the Census of Canada, the Statistics Canada Household Facilities and Equipment Survey and the CMHC National Housing Study.

Census of Canada

The 1981 Census of Canada contains information on the state of repair of the housing stock (in need of regular maintenance only, minor repairs or major repairs) according to the assessment of the occupants. These data (see Appendix A-13) can be cross-classified with all of the dwelling and occupant characteristics available in the Census.

Household Facilities and Equipment Survey

Data on the condition of dwellings is also available from the Statistics Canada Household Facilities and Equipment (HFE) Survey. CMHC sponsored the inclusion of a question on this in the HFE Survey in 1988 and also in 1982, 1985 and 1986. In the published statistics (see Appendix A-14), the data are available by province and by tenure. Further cross-classifications of the data with other variables are possible through special tabulations of the raw data.

National Housing Study

The CMHC National Housing Study collected more extensive data on the condition of the stock than either the Census or HFE; however, the data relate only to the low-rise stock. The National Housing Study not only collected information on the state of repair of the stock but also obtained data on the number of times when heating or plumbing systems broke down, as well as the condition of various components of the dwelling (see Appendix A-15). The accuracy of the National Housing Study data on occupants' assessments of

the condition of the stock were checked by trained building experts who provided estimates of the costs required to repair these deficiencies in the dwellings (see Appendix A-16).

DESIRABLE IMPROVEMENTS TO THE DATA

The National Housing Study has provided extremely useful information with respect to the state of repair of the low-rise dwelling stock as well as other useful information with respect to the stock in disrepair. In view of the concerns which have been expressed with respect to the state of repair of the high-rise apartment stock, similar information would be very useful in this area as well. This would likely require examination by trained professionals since many of the problems with the high-rise stock (e.g. corrosion of underground parking garages, weather penetration behind brick veneers, etc.) are not readily obvious to non-professionals.

There are differences with respect to the findings of the various surveys on the state of repair of the dwelling stock. Since at least some of these differences have been attributed to manner in which the questions are asked, it would appear desirable to formulate a common format for these questions so as to ensure that the data from all sources are comparable.

REQUIREMENTS AND EFFECTS OF RENOVATION

This section examines data on the volumes and types of labour and materials required for residential renovation work.

EXISTING CANADIAN DATA

There is relatively little information available in Canada on this issue. No data are produced on a regular basis: all of the information results from special studies. There are four main sources:

- André E. Leroux et Associés Ltée and Bobrow/Fieldman Group Inc., Labour and Material Requirements for Residential Rehabilitation, prepared for CMHC in 1983. This study presents estimates of:

  - the employment generated among various construction trades by expenditures on renovations in centres across Canada; and
  - the shares of total renovation spending on various parts of a dwelling which accrue to overhead and profit, labour costs and materials costs in centres across Canada.

  The information presented in the study was based on an analysis of renovations undertaken through the Residential Rehabilitation Assistance Program in each region in Canada.

- Clayton Research Associates, Renovation Construction - Economic Impacts, prepared for the Ontario Ministry of Housing in 1984. This study prepared estimates of the employment and income impacts of expenditures on renovation. It was based on the use of the Statistics Canada input-output model adjusted to take account of the differences between new construction and renovation work. The adjustments were necessary because the Statistics Canada model does not differentiate between new work and renovation work; the adjustments were based partly on the U.S. input-output model which does differentiate between new and renovation work.

- Clayton Research Associates, The Demand from Residential Renovation for Selected Wood Based Building Products, prepared for the Department of Regional Industrial Expansion in 1986. This study presented estimates of the volume of a selection of building products (e.g. windows, doors, kitchen cupboards) which were used in renovation work in Canada.

- CMHC, Materials Used in Residential Construction; a series of surveys. The latest year for which data are available is 1976, however, more current data are expected to be available in the latter half of 1989. While this series only relates to the volumes of various detailed types of materials used in new residential construction in each region in Canada, it provides a useful source document from which renovation estimates can be derived.

DESIRABLE IMPROVEMENTS TO THE DATA

The most important step in improving data in this area is the collection of the data required to formulate a renovation input structure for the Statistics Canada input-output model. This requires an extensive work effort to ascertain the types of materials and labour which are used in renovation, plus differences in the overheads/profits, etc. of firms engaged in renovation compared to new construction. Some of these data would be obtained by the types of improvements which would be desirable for data on renovation industry characteristics (see next section).

The U.S. input-output model has a much wider range of industry classifications than does the Statistics Canada model (see U.S. Department of Commerce, The Detailed Input-Output Structure of the U.S. Economy, 1984). The U.S. model includes as separate industries:

- Residential alterations and additions; and
- Maintenance and repair to residential buildings.

These are in addition to four separate classifications for new residential construction. In Canada, as noted earlier, there is only one classification for new residential construction (it includes improvements) and one classification for repair construction (it includes repairs to both residential and non-residential buildings as well as engineering work).

The type of input-output model used in the U.S. could provide very useful information on the volumes of different types of products and labour used in renovation work.

RENOVATION INDUSTRY CHARACTERISTICS

This section examines data on the types of firms that undertake renovation work including information such as firm size, financial performance, length of time in the industry and degree of specialization. Other useful information in this area includes "softer" data such as attitudes and opinions of renovation contractors on various factors which impact their industry.

EXISTING CANADIAN DATA

The main sources of information on the characteristics of firms in the renovation industry for Canada as a whole are the CMHC National Residential Renovation Industry Survey conducted in 1986 and (potentially) Statistics Canada's annual census of residential general contractors. In addition, there have been several special studies of the renovation industry in selected parts of Canada.

National Residential Renovation Industry Survey

CMHC conducted a survey among residential renovation contractors in 1986 which provided a great deal of information that was not previously available on a Canada-wide basis. The survey sought more qualitative types of information than are collected in the Statistics Canada census of residential contractors; for example, typical questions included impacts of government regulations, use of contracts and guarantees, information sources, business skills, financing, advertising, effects of government programs and market conditions on work volume, number of employees and use of other companies.

Information from the survey has been presented in the following two CMHC publications: National Residential Renovation Industry Survey, Summary of Preliminary Findings, 1987 and Residential Renovation Overview, Program Evaluation Findings, 1988. It would appear, however, that not all of the information collected in the survey has yet been published. Examples of information available from the survey are presented in Appendices A-17 and A-18.

Census of Residential General Contractors

Statistics Canada conducts an annual census of firms in the construction industry in Canada which collects information on the type of firm, principal type of construction, value of output, degree of specialization in principal type of work, financial

statement information, capital expenditures and numbers of employees (see Appendix A-19). The results of the Census are presented in a series of bulletins (Catalogues 61-204 to 61-210); however, little information is presented on renovation work as distinct from new construction.

Special tabulations can be obtained from Statistics Canada which provide some information on renovation firms; for example, see Appendix A-20). However, most renovation contractors are small and therefore relatively few are large enough to be included in the main part of the census which collects detailed information. As a result, special tabulations of the data as they are currently collected do not provide much useful data on renovation contractors.

Other Sources

There have also been several surveys of the renovation industry in particular parts of the country which provide information on the workings of the industry. These have been quite diverse in terms of geographic coverage, definition of the industry and survey methodology. They include:

- Donald M. Caskie, The Toronto Renovators: The Structure of the Industry and the Operations of Its Firms, prepared for CMHC in 1983; the survey consisted of personal interviews with officials of 38 renovation firms which were members of the Toronto Home Builders' Association.

- Ibid, Renovation in the 1990s: The Industry's Viewpoint, prepared for Canadian Home Builders' Association in 1987; the survey consisted of personal and telephone interviews with firms and organizations involved in renovation activity. This study provides an outlook for the renovation industry and its components.

- Reginald R. Copithorne, Review of Alberta's Home Renovation Industry, prepared for Alberta Municipal Affairs in 1984; a mail survey of general contractors involved in the renovation industry (based on 33 responses).

- CMHC, A Study of the Residential Renovation Industry in Nova Scotia: Preliminary Results, 1986; a mail survey of firms involved in renovation including special trades (based on 100 responses).

DESIRABLE IMPROVEMENTS TO THE DATA

The type of information required here can only be collected through extensive surveys and interviews. Two initiatives would provide useful information in this area:

- Identification of renovation work as a distinct category in the Statistics Canada Census of Construction - among both general and special trades contractors, a large proportion of firms undertake renovation work. However, by including improvements as "new" work, there is little information collected or published on firms which undertake renovation work. What is required is a recognition of renovation construction as a distinct sector and a reprocessing of the data to provide information on contractors doing this type of work. It would also likely require some additional effort to obtain information on a larger number of small contracting firms since smaller firms predominate in renovation construction.

- Periodic special surveys of contractors such as the CMHC National Residential Renovation Industry Survey - this type of survey can obtain "softer" types of data on attitudes, opinions and perceptions of renovator firms on various issues. For the next survey, however, it would appear desirable to include special trades as well as general contractors. Donald Caskie, The Demography of Residential Renovation Construction Firms in Selected Centres in Ontario and Western Canada: the identification of firms by industry sector and the selection of survey techniques, prepared for CMHC in 1985 provides useful observations on the sources from which to draw the sample for this type of survey.

- Another example of the type of informatin that can be collected on the renovation industry is provided by the Profile of the Remodeler and His Industry published annually by the U.S. National Association of Home Builders. This publication provides data by region on financing, problems, labour utilization, numbers and sizes of jobs undertaken by type of work, labour utilization and types of products purchased (see examples in Appendix A-21). A co-operative survey with the Canadian Home Builders' Association may be the best way to obtain this type of information.

CONCLUSIONS

While there have been significant improvements in the range of data available on renovation in Canada, there are inevitably areas in which further improvements in the data would be desirable. This report has identified a number of potential improvements to the data but no priority has been established with respect to their relative importance. Such an exercise is very difficult since everyone interested in the renovation sector will have different priorities: renovation contractors will likely be interested in different information than manufacturers supplying the industry and government officials studying the industry.

Nonetheless, this final section attempts to identify the potential improvements which appear most important from the point of view of a consultant who has worked extensively in this area - no doubt others may have different priorities. The most important areas of improvement appear to be:

- A renovation bulletin - this is simply a compilation of the data already available on renovation activity into one source. This would be relatively costless and would be a major improvement on the current situation. This could include cross-tabulations of data by type of activity (repairs versus improvements) and by type of property such as is available in the U.S.

- Improvements to the activity data - both the accuracy and array of information on the volume of renovation activity could be improved. The U.S. data provide a good guide as to the types of information which could usefully be added to the Canadian activity data - in particular, cross-tabulations of renovation spending by type of work (including both repairs versus improvements and the part of the dwelling on which work is done) and type of dwelling would be useful. Also, price deflators are necessary to convert renovation spending into constant dollar estimates.

- Conversions and deconversions - this is an area which is becoming increasingly important but there is relatively little data available.

- Presentation of the FAMEX data - there is a wealth of information potentially available in the FAMEX and Shelter Cost surveys but, in their present format, they require a great deal of manipulation to provide data which is easily interpreted by users. Consideration should be given to presenting the data in a special bulletin formatted to the needs of the users.

- Information on major renovations - most renovations are relatively small jobs but many in the industry are interested in major renovations. A study which identifies the types of work done as well as dwelling and occupant characteristics for major renovations would provide important insights in this area.

- A renovation input structure - the Statistics Canada input-output model could provide extremely useful data for analyses of the requirements and effects of renovation activity if it identified renovation work as a distinct sector, as does the U.S. model. At present, there is a serious lack of information on the volumes of materials and labour used in renovation work.

- Renovation industry characteristics - a change to the Statistics Canada Census of Construction to identify renovation contractors as a sector distinct from new construction would provide very useful information on the financial operations and sizes of renovation contractors. A survey such as that undertaken by the NAHB in the U.S. would also provide useful information.

APPENDIX

EXAMPLES OF RENOVATION DATA

APPENDIX

EXAMPLES OF RENOVATION DATA

This appendix presents examples of the renovation data described in the main body of the report. The data are not intended to provide a compendium of information on renovation; rather, the intent is to illustrate the types and forms of the data available. The examples consist mainly of photocopies of the relevant data from the publications. In most cases the data presented are the latest available, however, this is not always the case. For example, Statistics Canada data often cover two pages with the English on the left page and the French on the right page; since the latest years' data are presented on the right page (with the French description) the examples presented here often cover earlier years.

Existing Canadian Renovation Data

A-1 Statistics Canada, Construction in Canada (64-201).

A-2 Statistics Canada, National Income and Expenditure Accounts (13-001).

A-3 Statistics Canada, Unpublished Data.

A-4 Statistics Canada, Building Permits (64-001).

A-5 Environics, HOMES Survey as presented in Aluminews, Nov./ Dec. 1988, page 60.

A-6 U.S. Department of Commerce, Expenditures for Residential Upkeep and Improvements.

A-7 Statistics Canada, Family Expenditure in Canada, (62-555).

A-8 Statistics Canada FAMEX Microfiche data.

A-9 CMHC, National HOusing Study, excerpt from homeowner questionnaire.

A-10 CMHC, Residential Renovation Overview, Program Evaluation Report.

A-11 U.S. Department of Commerce, Residential Alterations and Repairs.

A-12 CMHC, Residential Renovation Overview, Program Evaluation Report.

A-13 Statistics Canada, 1981 Census of Canada (92-932).

A-14 Statistics Canada, Household Facilities and Equipment (64-202).

A-15 CMHC, Residential Renovation Overview, Program Evaluation Report.

A-16 CMHC, Residential Renovation Overview, Program Evaluation Report.

A-17 CMHC, Residential Renovation Overview, Program Evaluation Report.

A-18 CMHC, Residential Renovation Overview, Program Evaluation Report.

A-19 Statistics Canada, Residential General Contractors and Developers, (64-208).

A-20 Clayton Research Associates, The Evaluation of the Housing Industry in Canada 1946-1986, Working Paper 1, 1988.

A-21 National Association of Home Builders, Profile of the Remodeler and His Industry.

Statistics Canada, Construction in Canada (64-201)

TABLE 9. Total Value of Construction Work Purchased - New and Repair by Type of Structure, Canada, 1985-1986 (1.6.12)

No.	Type of structure	1985 New - Neuve	1985 Repair - Réparations	1985 Total	1986 New - Neuve	1986 Repair - Réparations	1986 Total
		$'000					
1	**Total construction**	**58,089,954**	**9,893,210**	**67,983,164**	**61,116,712**	**10,583,917**	**71,700,629**
2	**Total building construction**	**35,337,992**	**6,120,995**	**41,458,987**	**40,896,603**	**6,530,263**	**47,426,866**
3	**Residential**	**21,169,646**	**2,975,100**	**24,144,746**	**25,764,267**	**3,121,000**	**28,885,267**
4	Single detached	7,152,756	-	7,152,756	9,827,291	-	9,827,291
5	Semi-detached including duplexes	345,995	-	345,995	440,084	-	440,084
6	Apartments including row housing	2,626,571	-	2,626,571	3,392,526	-	3,392,526
7	Other(6)	11,044,324	2,975,100	14,019,424	12,104,366	3,121,000	15,225,366
8	**Industrial**	**2,609,623**	**860,505**	**3,470,128**	**2,360,450**	**840,874**	**3,201,324**
9	Factories, plants, workshops, food canneries, smelters	2,227,138	707,420	2,934,558	2,151,356	697,574	2,848,930
10	Mine and mine mill buildings	216,875	72,569	289,444	147,475	62,665	210,140
11	Railway stations, roadway buildings	36,026	35,785	71,811	3,303	35,838	39,141
12	Railway shops, engine houses, water and fuel stations	129,584	44,731	174,315	58,316	44,797	103,113
13	**Commercial**	**7,362,326**	**1,334,762**	**8,697,088**	**8,566,904**	**1,552,288**	**10,119,112**
14	Warehouses, storehouses, refrigerated storage, etc.	478,102	115,397	593,499	596,366	132,811	729,177
15	Grain elevators	92,808	25,032	117,840	51,101	24,312	75,413
16	Hotels, clubs, restaurants, cafeterias, tourist cabins	610,393	111,114	721,507	773,749	107,480	881,229
17	Office buildings	3,395,263	541,744	3,937,007	4,057,102	674,354	4,731,456
18	Stores, retail and wholesale	1,719,904	316,821	2,036,725	2,019,817	373,065	2,392,882
19	Garages and service stations	339,600	133,059	472,659	321,343	131,845	453,188
20	Theatres, arenas, amusement and recreational buildings	726,256	91,595	817,851	747,426	108,341	855,767
21	Laundries and dry cleaning establishments	-	-	-	-	-	-
22	**Institutional**	**2,589,545**	**529,793**	**3,119,338**	**2,979,827**	**585,358**	**3,565,185**
23	Schools and other educational buildings	1,000,805	291,569	1,292,374	1,188,724	324,681	1,513,405
24	Churches and other religious buildings	129,677	21,581	151,258	135,354	23,765	159,119
25	Hospitals, sanatoria, clinics, first-aid stations, etc.	858,008	151,036	1,009,044	893,056	162,263	1,055,319
26	Other institutional buildings	601,055	65,607	666,662	762,693	74,649	837,342
27	**Other building construction**	**1,606,852**	**420,835**	**2,027,687**	**1,225,155**	**430,823**	**1,655,978**
28	Farm buildings (excluding dwellings)	551,851	204,555	756,406	508,242	152,211	660,453
29	Broadcasting, radio and television, relay and booster stations, telephone exchanges	98,621	48,381	147,002	72,429	61,216	133,645
30	Aircraft hangars	17,371	22,763	40,134	17,789	32,582	50,371
31	Passenger terminals, bus, boat, air and other	171,967	14,910	186,877	134,943	16,525	151,468
32	Armouries, barracks, drill halls, etc.	13,285	18,094	31,379	45,076	30,815	75,891
33	Bunkhouses, dormitories, camp cookeries, bush depots and camps	26,280	12,650	38,930	7,458	11,960	19,418
34	Laboratories	328,035	12,705	340,740	211,417	19,049	230,466
35	Other building construction	399,442	86,777	486,219	227,801	106,465	334,266

6 A breakdown of repair expenditures for residential construction by type of structure is available for single-detached homes and other (i.e., multiple housing) on request. Total repair expenditures are published within the "other" residential category. For new residential construction, "other" includes expenditures on mobile homes, cottages, conversions, major alter- ations, improvements and acquisition costs.

Statistics Canada, National Income and Expenditure Accounts (13-001)

TABLE 16. Investment in Fixed Capital, by Sector and Type

Seasonally Adjusted at Annual Rates

No.	CANSIM matrix No. 006736	1981 I	1981 II	1981 III	1981 IV	1981 Year – Année	1982 I	1982 II	1982 III	1982 IV	1982 Year – Année
		millions of dollars – millions de dollars									
	Government										
1	Residential construction	32	72	80	64	62	48	56	64	76	61
2	Non-residential construction	7,440	7,712	7,980	8,232	7,841	8,544	8,780	9,004	9,268	8,899
3	Machinery and equipment	1,364	1,484	1,612	1,716	1,544	1,604	1,588	1,532	1,512	1,559
4	Total	8,836	9,268	9,672	10,012	9,447	10,196	10,424	10,600	10,856	10,519
	Business										
5	Residential construction	20,284	22,108	20,672	19,212	20,569	18,656	16,772	16,648	18,272	17,587
6	New construction	10,644	11,792	11,812	10,240	11,122	9,568	8,412	7,520	7,920	8,355
7	Alterations and improvements	6,116	6,540	6,308	6,448	6,353	6,708	6,528	6,676	7,172	6,771
8	Transfer costs	3,524	3,776	2,552	2,524	3,094	2,380	1,832	2,452	3,180	2,461
9	Non-residential construction	25,660	26,604	27,428	29,240	27,233	28,852	27,340	25,204	25,344	26,685
10	Machinery and equipment	27,536	29,096	29,320	29,528	28,870	28,328	26,612	25,812	25,392	26,536
11	Total	73,480	77,808	77,420	77,980	76,672	75,836	70,724	67,664	69,008	70,808
12	Total investment in fixed capital	82,316	87,076	87,092	87,992	86,119	86,032	81,148	78,264	79,864	81,327

No.	CANSIM matrix No. 006736	1985 I	1985 II	1985 III	1985 IV	1985 Year – Année	1986 I	1986 II	1986 III	1986 IV	1986 Year – Année
		millions of dollars – millions de dollars									
	Government										
1	Residential construction	16	16	16	16	16	16	20	16	16	17
2	Non-residential construction	9,756	10,432	10,804	11,004	10,499	10,592	10,092	9,812	9,612	10,027
3	Machinery and equipment	2,588	2,416	2,332	2,224	2,390	2,404	2,492	2,532	2,608	2,509
4	Total	12,360	12,864	13,152	13,244	12,905	13,012	12,604	12,360	12,236	12,553
	Business										
5	Residential construction	23,088	23,980	25,744	28,076	25,222	28,332	30,260	31,488	33,144	30,806
6	New construction	10,004	10,860	12,136	13,612	11,653	14,108	14,728	15,548	16,988	15,343
7	Alterations and improvements	9,168	9,068	9,300	9,744	9,320	9,548	9,816	9,992	9,940	9,824
8	Transfer costs	3,916	4,052	4,308	4,720	4,249	4,676	5,716	5,948	6,216	5,639
9	Non-residential construction	25,336	27,460	27,428	26,760	26,746	27,824	25,588	24,564	24,532	25,627
10	Machinery and equipment	27,660	28,340	29,888	31,484	29,343	31,700	32,016	32,776	32,868	32,340
11	Total	76,084	79,780	83,060	86,320	81,311	87,856	87,864	88,828	90,544	88,773
12	Total investment in fixed capital	88,444	92,644	96,212	99,564	94,216	100,868	100,468	101,188	102,780	101,326

TABLE 17. Investment in Fixed Capital, by Sector and Type at 1981 Prices

Seasonally Adjusted at Annual Rates

No.	CANSIM matrix No. 006737	1981 I	1981 II	1981 III	1981 IV	1981 Year – Année	1982 I	1982 II	1982 III	1982 IV	1982 Year – Année
		millions of dollars – millions de dollars									
	Government										
1	Residential construction	32	72	80	64	62	48	56	64	72	60
2	Non-residential construction	7,796	7,836	7,780	7,952	7,841	8,068	8,176	8,296	8,620	8,290
3	Machinery and equipment	1,392	1,484	1,616	1,684	1,544	1,540	1,504	1,432	1,420	1,474
4	Total	9,220	9,392	9,476	9,700	9,447	9,656	9,736	9,792	10,112	9,824
	Business										
5	Residential construction	21,044	22,064	20,324	18,844	20,569	18,336	16,476	16,256	17,764	17,208
6	New construction	11,076	11,720	11,632	10,060	11,122	9,384	8,252	7,352	7,780	8,192
7	Alterations and improvements	6,368	6,500	6,224	6,320	6,353	6,544	6,324	6,312	6,572	6,438
8	Transfer costs	3,600	3,844	2,468	2,464	3,094	2,408	1,900	2,592	3,412	2,578
9	Non-residential construction	26,968	27,128	27,044	27,792	27,233	27,176	25,380	23,112	23,484	24,788
10	Machinery and equipment	28,088	29,452	29,264	28,676	28,870	26,952	24,964	23,896	23,528	24,835
11	Total	76,100	78,644	76,632	75,312	76,672	72,464	66,820	63,264	64,776	66,831
12	Total investment in fixed capital at 1981 prices	85,320	88,036	86,108	85,012	86,119	82,120	76,556	73,056	74,888	76,655

VALUE OF RENOVATION ACTIVITY (REPAIRS, IMPROVEMENTS, CONVERSIONS)
AS A PROPORTION OF RESIDENTIAL CONSTRUCTION, 1977-1988

CANADA
Current $000's

Year	New Construction	Repairs	Alterations-Improvements	Cottages	Conversions	Total (Repairs, Improvements, Conversions)	Supplementary (Acquisition) Costs	Total Housing Investment and Repairs	Renovations (Repairs, Improvements and Conversions) As % of Total
	(1)	(2)	(3)	(4)	(5)	(6) (2)+(3)+(4)+(5)	(7)	(8) (1+6+7)	(6)÷(8)
1977	8,759,160	1,353,000	3,448,002	313,391	16,299	5,130,692	600,212	14,490,064	35.4
1978	8,883,863	1,502,000	3,981,000	338,701	21,683	5,843,384	679,686	15,406,933	37.9
1979	8,734,097	1,713,000	4,708,998	427,883	28,986	6,878,867	662,551	16,275,515	42.3
1980	8,206,762	1,909,000	5,289,999	431,735	32,913	7,663,647	552,718	16,423,127	46.7
1981	10,005,872	2,190,000	6,353,002	470,419	52,561	9,065,982	655,258	19,727,112	46.0
1982	7,363,591	2,399,000	6,771,004	415,969	51,[illegible]	9,637,742	583,765	17,585,098	54.8
1983	9,334,149	2,642,000	7,829,000	480,677	89,114	11,040,791	629,087	21,004,027	52.6
1984	8,853,914	2,791,300	8,799,003	551,304	87,681	12,229,288	647,676	21,730,878	56.3
1985	10,315,021	2,943,200	9,319,999	594,245	142,076	12,999,520	617,302	23,931,843	54.3
1986	13,848,588	3,092,900	9,823,999	522,287	135,367	13,574,553	854,019	28,277,160	48.0
1987PR	19,286,406	3,305,900	11,299,008	447,450	161,276	15,213,634	1,087,074	35,587,114	42.8
1988M/F	18,227,370	3,300,000	13,200,000	410,000	180,000	17,090,000	1,307,487	36,624,857	46.7

October 4, 1988

Statistics Canada, Building Permits (64-001).

TABLE 5B. Residential Building Permits Issued in Canada, by Type of Structure

TABLEAU 5B. Permis de bâtir domiciliaires émis au Canada, selon le genre de bâtiments

December - 1987 - Décembre

	Singles - Simples		Cottages - Chalets		Doubles - Doubles		Row housing - Maisons en rangée		Apartments - Appartements		Conversions - Transformations		Mobile homes - Maisons mobiles	Garages - Garages	Improvements - Améliorations	Total
	Units - Unités	Value - Valeur	Units - Unités	Value - Valeur	Units - Unités	Value - Valeur	Units - Unités	Value - Valeur	Units - Unités	Value - Valeur	Units - Unités	Value - Valeur	Value - Valeur	Value - Valeur	Value - Valeur	Value - Valeur
	Value in thousands of dollars - Valeur en milliers de dollars															
CANADA	5,211	479,311	170	4,778	355	29,199	1,193	67,963	5,225	313,788	417	8,140	1,339	6,217	58,156	958,799
NFLD	89	5,572	-	-	16	528	2	120	8	285	5	65	5	21	435	7,031
P E I - I P E	19	1,035	3	50	6	305	-	-	60	1,412	5	34	-	27	311	3,176
N S - N E	141	8,821	3	63	41	2,038	9	948	29	1,373	7	183	161	193	1,344	15,170
N B	64	2,739	-	-	14	648	-	-	10	330	18	127	-	36	462	4,348
QUE	1,183	102,264	11	301	106	7,144	175	11,341	2,179	100,237	248	5,897	387	997	15,033	243,581
ONT	2,225	235,997	63	3,351	122	6,535	766	41,675	2,704	183,389	126	1,564	561	2,766	29,189	505,027
MAN	138	9,690	27	872	6	195	6	315	2	73	-	-	5	168	2,158	13,476
SASK	84	5,503	1	3	14	551	-	-	8	330	-	-	22	326	1,282	8,017
ALTA	560	45,304	8	70	12	1,176	4	436	7	300	-	-	8	583	2,074	49,901
B C - C B	700	60,595	3	54	14	839	231	13,178	316	25,992	8	270	190	1,097	5,765	107,930
YUKON	12	948	1	14	-	-	-	-	2	65	-	-	-	-	46	1,073
N W T - T-N-O	16	863	-	-	4	280	-	-	-	-	-	-	-	3	51	1,117
TOTAL METRO	3,683	378,402	2	68	-	13,856	884	65,335	4,223	268,818	311	6,558	785	2,472	34,295	742,818
CAL - CALG	264	22,670	-	-	4	408	-	-	-	-	-	-	-	123	624	23,825
CHIC - ICHQ	7	510	-	-	2	60	-	-	4	225	-	-	-	-	176	971
EDMON - TON	181	13,276	-	-	-	-	4	436	-	-	-	-	8	197	502	14,419
HALI - FAX	45	3,377	1	8	38	1,954	9	948	12	633	3	83	161	46	664	7,874
HAMIL - TON	117	12,414	-	-	6	307	-	-	12	590	2	50	14	101	1,334	14,810
HULL	38	3,327	1	60	12	724	9	400	32	1,435	117	3,100	-	-	360	9,986
KITCH - ENER	134	12,787	-	-	10	860	7	525	229	10,435	2	40	9	57	648	25,781
LON - DON	86	8,810	-	-	24	1,908	150	6,380	-	-	3	23	8	56	266	16,551
MONT - REAL	720	70,025	-	-	36	3,691	21	1,766	386	70,370	88	2,216	158	251	5,613	154,884
OSHA - WA	48	4,187	-	-	4	248	-	-	20	720	1	1	67	-	353	5,576
OTTA - WA	119	11,883	-	-	6	367	234	13,596	276	13,664	5	183	-	76	1,226	40,915
QUE - BEC	122	8,741	-	-	12	585	8	634	138	6,127	9	185	20	62	1,337	17,671
REGI - NA	11	755	-	-	2	50	-	-	-	-	-	-	22	82	583	1,562
ST CA - RINES	58	4,571	-	-	4	185	-	-	92	6,530	4	60	36	42	300	11,729
SAINT - JOHN	16	1,378	-	-	-	-	-	-	-	-	2	17	-	16	131	1,542
ST - JOHNS	34	2,741	-	-	16	529	2	120	8	285	5	65	-	11	85	3,835
SASKA - TOON	38	2,665	-	-	12	581	-	-	-	-	-	-	-	68	294	3,528
SUDBU - RY	20	1,321	-	-	-	-	-	-	-	-	-	-	-	-	118	1,439
THUND - BAY	5	408	-	-	-	-	-	-	-	-	-	-	-	64	247	719
TORON - TO	897	123,310	-	-	70	1,480	127	9,049	1,618	127,149	63	439	177	305	11,695	273,604
TROIS - RIV	8	672	-	-	2	130	-	-	24	1,180	-	-	-	7	334	2,323
VANCO - UVER	459	44,836	-	-	18	689	160	8,367	303	25,557	6	225	63	598	2,652	82,987
VICTO - RIA	66	4,877	-	-	2	88	-	-	1	60	1	11	-	119	1,441	6,588
WIND - SOR	34	2,819	-	-	-	-	73	3,170	68	3,858	-	-	42	147	2,301	12,787
WINN - PEG	109	8,122	-	-	-	-	-	-	-	-	-	-	-	44	1,191	9,357

Renovation Activity Up 21% — Environics

After holding steady in 1987, average renovation expenditures increased 21% to $3,795, according to the 1988 Environics Home National Report. Environics has surveyed 4,000 households nationally.

After three years of steady increase, the percentage of urban homeowners carrying out renovation work has levelled off at 84%.

Environics estimated that residential renovation work was a $10.4 billion industry, up 21% from '85-'87, in urban Canada in '87-'88. Extrapolating this figure to include rural Canada suggests that the national residential renovation market has grown to $18.7 billion for 1987-88, up from $16 billion in the preceding year.

Homeowners show an interest in doing renovation that will reduce the amount of maintenance they have to do on their houses. Just over a third of them think it is "very likely" that they will carry out renovations to make their houses more maintenance free. Modernization will motivate a large proportion of renovators in Toronto and Montreal.

The proportion of homeowners carrying out renovation work associated with energy efficiency has decreased this year. Declines were noted in seven of eight renovation categories.

The report classifies four types of renovators: major, exterior, interior and minor.

The major renovators are the youngest, best educated and the most affluent. They live in the most expensive houses and are most likely living in a house that they bought new.

Toronto, with the largest average renovation expenditure of $5282, had the largest percentage of major renovators, 12%, and interior, 19%. The province of Quebec and Montreal has the largest percentage of exterior renovators, 25% and 20% respectively.

In dollar value, the top five renovation markets in 1987-88 were carpets and flooring — $1.7 billion, kitchens — $1.7, landscaping — $1.6, roofing — $1.3 and windows — $1.2 billion.

Exterior Renovation	HOs Doing Reno	Average Expend.	Net'l Expend.*
Landscaping	28.6%	989	89.7
Roofing	12.4%	1,947	339.7
Windows	10.0%	2,248	1,247.5
Garage	4.7%	3,349	873.5
Driveway	10.3%	1,368	781.8
Walls	5.4%	2,322	695.8
Fencing	14.2%	745	587.0
Painting	30.7%	330	562.2
Pool	2.8%	3,510	545.3
Veranda	11.2%	854	530.7
Doors	11.1%	809	498.3
Eaves	10.5%	691	402.6
Patio	6.3%	935	326.8
Other	3.6%	1,252	260.1
Steps	7.2%	350	139.8
Weatherstrip	19.8%	96	105.4
Lighting	9.7%	179	96.3
Chimney	3.9%	329	71.2
Total	72.0%	$2,427	9,776.6

* Millions of Dollars

Interior Renovation	HOs Doing Reno	Average Expend.	Net'l Expend.*
Carpets	22.6%	1,369	1,744.1
Kitchen	23.3%	1,305	1,716.7
Basement	6.7%	3,164	1,195.5
Painting	49.8%	401	1,128.6
Bathroom	22.7%	750	964.0
Other	5.1%	2,328	670.0
Plumbing	18.2%	628	644.2
Heating	5.6%	1,788	562.0
Air Conditioning	6.9%	1,093	426.5
Walls	7.3%	889	365.7
Security	5.2%	1,156	338.8
Lighting	16.8%	355	337.9
Insulation	10.8%	500	304.6
Doors	7.6%	674	288.9
Rewiring	11.1%	438	276.0
Ventilation	8.8%	365	181.7
Fireplace	2.1%	1,114	133.7
Closets	10.2%	215	124.4
Ceilings	5.4%	371	113.3
Total	70.0%	$2,248	$8,891.4

* Millions of dollars

Environics, HOMES Survey as presented in Aluminews, Nov./Dec. 1988, page 60.

U.S. Department of Commerce, Expenditures for Residential Upkeep and Improvements.

Table 1. Expenditures for Residential Properties, by Property Type and Structural Purpose: Quarterly 1985 to 1988
Not Seasonally Adjusted in Current Dollars

(Millions of dollars. Components may not add to totals due to rounding)

Property type, year, and quarter	Total expenditures	Maintenance and repairs	Improvements					
			Total	Additions and alterations				
				Total	To structures		To property outside of structures	Major replacements
					Additions	Alterations		
ALL PROPERTIES								
Annual								
1985	80,267	35,358	44,909	28,775	3,988	17,599	7,211	16,134
1986	91,274	35,971	55,303	38,608	7,377	21,192	10,040	16,696
1987	94,082	38,229	55,853	39,978	9,557	21,641	8,779	15,875
Relative standard error of annual estimates (percent)	4	5	5	7	18	7	13	7
Quarterly								
1985: 1st quarter	15,935	7,232	8,704	5,573	586	4,157	861	3,131
2nd quarter	19,806	9,374	10,432	7,132	1,059	3,698	2,375	3,300
3rd quarter	21,706	9,267	12,439	8,027	1,154	4,464	2,409	4,412
4th quarter	22,821	9,486	13,336	8,043	1,187	5,281	1,575	5,292
1986: 1st quarter	17,542	7,603	9,939	6,689	1,043	4,483	1,162	3,250
2nd quarter	23,074	8,234	14,839	11,098	2,130	5,855	3,113	3,742
3rd quarter	28,803	11,318	17,285	11,572	2,386	4,904	4,283	5,713
4th quarter	22,055	8,816	13,239	9,249	1,817	5,950	1,481	3,991
1987: 1st quarter	18,020	7,763	10,257	7,234	1,328	4,234	1,672	3,024
2nd quarter	23,778	8,826	14,952	11,358	3,076	5,800	2,481	3,595
3rd quarter	27,712	10,267	17,446	12,094	3,222	5,895	2,977	5,351
4th quarter	24,572	11,374	13,198	9,293	1,932	5,711	1,850	3,905
1988: 1st quarter	18,533	9,155	9,378	6,416	873	3,979	1,565	2,961
2nd quarter[2]	28,883	10,493	18,390	13,742	4,035	6,303	3,405	4,647
Relative standard error of current quarter estimates[2] (percent)	6	7	8	10	28	13	21	14
ALL OWNER-OCCUPIED PROPERTIES[1]								
Annual								
1985	50,810	17,475	33,335	23,448	3,402	13,530	6,515	9,887
1986	57,722	17,506	40,216	31,217	6,401	16,467	8,350	8,999
1987	58,094	18,374	39,720	31,999	8,189	16,297	7,513	7,721
Relative standard error of annual estimates (percent)	5	6	6	7	17	8	14	10
Quarterly								
1985: 1st quarter	9,550	2,886	6,664	5,056	563	3,770	723	1,608
2nd quarter	13,752	5,283	8,469	5,994	1,025	2,818	2,151	2,476
3rd quarter	14,018	5,034	8,982	6,506	979	3,256	2,271	2,476
4th quarter	13,492	4,272	9,220	5,892	836	3,687	1,370	3,328
1986: 1st quarter	9,860	3,462	6,498	5,101	889	3,520	693	1,397
2nd quarter	16,860	4,877	11,183	8,932	1,992	4,109	2,831	2,251
3rd quarter	17,497	5,101	12,396	9,187	2,013	3,570	3,604	3,209
4th quarter	14,406	4,267	10,140	7,998	1,507	5,268	1,223	2,142
1987: 1st quarter	10,460	3,794	6,666	5,579	1,146	3,005	1,428	1,087
2nd quarter	15,776	4,529	11,247	9,000	2,398	4,402	2,201	2,247
3rd quarter	18,153	4,925	13,227	10,578	2,980	4,950	2,888	2,649
4th quarter	13,705	5,126	8,579	8,842	1,887	3,940	1,215	1,737
1988: 1st quarter	10,418	3,895	6,523	4,788	836	2,587	1,366	1,734
2nd quarter[2]	20,263	5,689	14,574	11,892	3,483	5,240	2,988	2,682
Relative standard error of current quarter estimates[2] (percent)	7	10	10	12	30	15	24	19

Statistics Canada, Family Expenditure in Canada, (62-555).

TABLE 3. Summary and Selective Detailed Family Expenditure by City, 17 Cities, Canada, 1984

All Families and Unattached Individuals

		All classes Toutes catégories		St. John's (Nfld.) St. John's (T.-N.)		Charlottetown-Summerside		Halifax		St. John (N.B.) St. John (N.-B.)	
		Av. per fam. May per fam.	% chg. % decl.	Av. per fam. May per fam.	% chg. % decl.	Av. per fam. May per fam.	% chg. % decl.	Av. per fam. May per fam.	% chg. % decl.	Av. per fam. May per fam.	% chg. % decl.
1000-1572	Food	4773	100.0	4835	100.0	3836	99.7	4391	100.0	3931	100.0
1000-1520	Food purchased from stores	3482	99.6	3836	99.3	2842	98.6	3217	99.6	2987	98.4
1580-1572	Food purchased from restaurants etc.	1274	93.1	970	90.1	745	91.1	1142	85.4	916	92.6
2000-2131	Shelter	5773	99.7	5173	98.8	4656	100.0	5975	100.0	4116	100.0
2000-2086	Principal accommodation	5461	99.6	4878	98.4	4305	99.7	5640	100.0	3939	99.7
2000-2002	Rented living quarters	2046	49.4	1139	32.1	1623	52.7	2240	51.2	1246	43.6
2000	Rent	1984	49.0	1123	32.1	1604	52.4	2203	50.5	1224	43.2
2010-2080	Owned living quarters	2466	53.1	2118	88.3	1267	80.5	2969	52.8	1472	56.2
2010-2049	Maintenance, repairs & replacements	348	41.0	408	61.0	257	42.6	351	44.2	230	47.0
2010-2029	Contract and labour cost	246	21.7	195	23.5	178	28.4	221	23.4	145	22.0
2030-2049	Materials	102	31.4	213	56.2	79	29.9	130	33.3	85	36.6
2071	Property taxes	422	52.6	268	53.0	277	49.6	442	51.4	253	57.1
2072	Homeowners insurance premiums	147	52.0	175	65.1	94	47.9	139	50.6	136	54.6
2073-2074	Mortgage interest	1135	30.9	1085	35.9	581	24.2	934	29.5	784	28.3
2080-2086	Water, fuel and electricity	946	84.5	1621	83.1	1415	34.7	1211	86.5	1221	91.3
2080	Water	85	49.1	55	43.8	73	43.3	89	45.1	73	38.0
2081	Fuel oil and other liquid fuel	158	17.6	620	41.7	859	80.5	805	34.8	527	43.7
2082	Piped gas	260	37.4	...	...	...	...	...	...	...	...
2083	Electricity	424	82.7	902	83.1	821	84.2	478	86.5	541	84.1
2100-2131	Other accommodation	312	44.4	295	34.9	250	43.4	435	52.4	451	59.1
2120-2123	Traveller accommodation	166	37.6	90	25.9	125	37.1	194	...	391	49.2
									85.2	449	73.7
									62.8	186	44.1
									84.4	283	72.0
2200-2283	Household operation	1384	99.8	1496	99.3	1026	...	...	...	...	...
2200-2205	Communications	434	98.9	431	98.1	...	...	...	...	...	...
2200-2204	Telephone	401	98.5	407	95.3	611	87.9	1011	95.3	722	92.8
2201-2204	Telephone services	393	98.5	404	...	289	42.5	397	58.8	287	45.7
2202	Basic charge	167	56.5	184	44.5	88	30.4	129	45.8	95	35.4
2204	Long distance toll charges	215	86.0	67	54.9	78	62.5	128	70.5	121	68.4
2210-2213	Child care	174	16....	...	...	...	...	...	...	...	...
2230-2234	Pet expenses	122	...	...	...	...	...	...	...	...	...
2240-2250	Household cleaning supplies	...72	89.2	5530	96.4	3588	82.1	6219	92.5	3418	83.5
2260-2268	Paper, plastic & foil household supplies	...	...	...	...	...	...	...	...	...	...
		1506	82.9	1589	81.1	1391	78.3	1974	86.5	1258	77.0
2300-2496	Household furnishings	256	49.0	295	48.6	183	39.3	310	55.2	211	50.7
2300-2344	Household ... payments	437	75.8	414	75.5	332	66.4	479	83.3	358	72.0
2300-2311	Fur... pension fund payments	787	78.6	873	79.1	788	67.3	1185	83.6	657	72.0
2320-2329	...ec & Quebec pension plan	337	78.4	328	79.1	243	67.3	339	83.3	259	72.0
2360-2...	Other government	208	13.0	399	25.8	373	19.9	584	34.1	233	18.8
...	Other (excl. RRSP)	242	18.0	...	...	153	12.9	263	15.9	...	...
3720-3724	Gifts and contributions	1047	90.4	988	83.2	889	83.1	1310	96.8	1058	96.9
3720-3722	Persons outside spending unit	826	83.8	641	83.9	536	86.7	975	94.3	713	92.9
3720-3721	Money gifts and contributions	480	39.9	254	30.1	184	32.0	452	38.3	330	43.3
3722	Other gifts eg. flowers clothing, toys	346	72.0	387	75.4	373	76.9	522	87.9	383	82.4
3723-3724	Charitable organizations	221	69.4	328	80.9	353	80.2	335	78.5	344	80.1
3723	Religious organizations	140	36.1	277	61.4	250	64.0	213	48.0	279	59.0
3724	Other charitable organizations	81	59.9	51	65.3	103	72.8	122	73.1	65	63.2
1000-3612	Total current consumption	24055	100.0	23978	100.0	18639	100.0	25135	100.0	19400	100.0
1000-3724	Total expenditure	32680	100.0	32067	100.0	24418	100.0	34638	100.0	25134	100.0
3800-3855	Total value of items not purchased	385	73.4	471	82.6	389	75.3	917	87.2	473	88.5
3800-3830	Value of food not purchased	37	21.9	...	...	25	16.2	23	14.6	31	12.6
3850-3855	Value of gifts received	317	67.9	453	81.3	395	72.3	494	83.9	440	77.7
	Selected items in net change in assets:										
3900	Registered retirement savings plans	549	25.8	373	22.5	582	33.0	282	24.0	344	17.4
3901	Change in principal of mortgage on home	-701	31.1	-865	36.8	-181	24.5	-2078	30.2	-78	29.1
3902-3904	Additions, renovations etc. to home	653	23.6	634	32.2	472	21.2	522	26.3	611	27.9

Statistics Canada FAMEX Microfiche data.

DESCRIPTION OF STATISTICAL TABLE CONTENTS

Detailed Expenditures Stub Descriptions

2000-2131 Shelter
2000-2096 Principal accommodation
2000-2002 Rented living quarters
2000 Rent
2001 Tenants' maintenance, repairs & alter.
2002 Tenants' insurance premiums
2010-2080 Owned living quarters
2010-2049 Maintenance, repairs & replacements
2010-2029 Contract and labour cost
2010 Outdoor patios, fences & driveways
2011 Exterior walls
2012 Painting (interior & exterior)
2013 Wall papering
2014 Other interior walls & ceiling
2015 Carpentry (incl. wooden flooring)
2016-2017 Electrical systems
2016 Replacements
2017 Repairs & maintenance
2018-2021 Mechanical systems
2018-2019 Plumbing
2018 Replacement of fixtures
2019 Repairs & maintenance
2020-2021 Heating & air conditioning
2020 Replacement of equipment
2021 Repairs & maintenance
2022 Complete re-roofing
2023 Eavestroughing & other roof repair
2024-2025 Hard surface flooring & carpeting
2024 Replacement of carpeting
2025 Repairs & maintenance
2026-2029 Other replacements & repairs
2026 Replacement built-in appliances
2027 Caulking & weather stripping
2028 Other replacements
2029 Other repairs and maintenance
2030-2049 Materials
2030 Outdoor patios, fences & driveways
2031 Exterior walls
2032 Painting (interior & exterior)
2033 Wall papering
2034 Other interior walls & ceiling
2035 Carpentry (incl. wooden flooring)
2036-2037 Electrical systems
2036 Replacements
2037 Repairs & maintenance
2038-2041 Mechanical systems
2038-2039 Plumbing
2038 Replacement of fixtures
2039 Repairs & maintenance
2040-2041 Heating & air conditioning
2040 Replacement of equipment
2041 Repairs & maintenance
2042 Complete re-roofing
2043 Eavestroughing & other roof repair
2044-2045 Hard surface flooring & carpeting
2044 Replacement of carpeting
2045 Repairs & maintenance
2046-2049 Other replacements & repairs
2046 Replacement built-in appliances
2047 Caulking & weather stripping
2048 Other replacements
2049 Other repairs and maintenance
2070 Condominium charges
2071 Property taxes
2072 Homeowners insurance premiums
2073-2074 Mortgage interest
2073 First mortgage
2074 Second mortgage

Detailed Expenditures Stub Descriptions - Concluded

Expenditures for:

4510-4557 Additions, renovations & new installations
4510-4519 Additions
4510-4514 Contract and labour cost
4510 Structural extensions
4511 Garages & car ports
4512 Inground swimming pools
4513 Fences, patios, driveways
4514 Landscaping
4515-4519 Separate material cost
4515 Structural extensions
4516 Garages & car ports
4517 Inground swimming pools
4518 Fences, patios, driveways
4519 Landscaping
4530-4535 Renovations and alterations
4530-4532 Contract and labour cost
4530 Both exterior & interior
4531 Exterior only
4532 Interior only
4533-4535 Separate material cost
4533 Both exterior & interior
4534 Exterior only
4535 Interior only
4540-4551 New installations of equipment & fixtures
4540-4545 Contract and labour cost
4540 Plumbing fixtures
4541 Heating & air conditioning
4542 Electrical
4543 Built-in appliances
4544 Wall-to-wall carpeting
4545 Other new installations
4546-4551 Separate material cost
4546 Plumbing fixtures
4547 Heating & air conditioning
4548 Electrical
4549 Built-in appliances
4550 Wall-to-wall carpeting
4551 Other new installations

CMHC, National Housing Study, excerpt from homeowner questionnaire.

14.a) **Please identify the types of renovation work you did in 1985 and how you paid for the materials and labour for this work by circling the numbers that apply. These questions are asked first for the exterior, and then for the interior and finally for the mechanical systems on your dwelling.**

	OUTSIDE OF BUILDING					
	WORK DONE IN 1985			COSTS		
Sitework (Driveway/planting/fencing)	1	2	3	1	2	3
Outside Walls Structural	1	2	3	1	2	3
Wall Finish Wood	1	2	3	1	2	3
Other	1	2	3	1	2	3
Roof Gutters, downspouts	1	2	3	1	2	3
Roof covering	1	2	3	1	2	3
(e.g., shingles)	1	2	3	1	2	3
Chimney	1	2	3	1	2	3
Doors/Windows	1	2	3	1	2	3
Steps/Porches	1	2	3	1	2	3

14. b)

	INSIDE OF BUILDING					
	WORK DONE IN 1985			COSTS		
Carpentry Floors	1	2	3	1	2	3
Walls	1	2	3	1	2	3
Doors	1	2	3	1	2	3
Shelves/cabinets	1	2	3	1	2	3
Drywall/plaster	1	2	3	1	2	3
Wall Surfaces (paint, paper) ...	1	2	3	1	2	3
Floor Covering Hardwood	1	2	3	1	2	3
Carpet	1	2	3	1	2	3
Tile	1	2	3	1	2	3

14. c)

	MECHANICAL					
	WORK DONE IN 1985			COSTS		
Electrical Lighting fixtures	1	2	3	1	2	3
Wiring	1	2	3	1	2	3
Heating/Cooling Furnace/cooling unit.....	1	2	3	1	2	3
Fireplace, wood stove	1	2	3	1	2	3
Duct work, pipes	1	2	3	1	2	3
Plumbing Pipes	1	2	3	1	2	3
Fixtures (sink etc.)	1	2	3	1	2	3
Hot water heater	1	2	3	1	2	3
Insulation Attic insulation	1	2	3	1	2	3
Wall insulation	1	2	3	1	2	3
Doors, Windows	1	2	3	1	2	3
Other (Please specify)	1	2	3	1	3	3

WORK DONE IN 1985

1. **Repairs, Replacements:** work done to improve physical safety or soundness by fixing or replacing weak, worn out or damaged parts of a building.
2. **Improvements:** work done to upgrade or modernize a building.
3. **Maintenance:** work done to keep a building in its current physical condition.

COSTS

1. **Paid a firm:** you paid a firm or contractor who supplied the materials and labour
2. **Paid for materials:** you purchased the materials yourself
3. **Paid for labour:** you hired the labour yourself

CMHC, Residential Renovation Overview, Program Evaluation Report.

TABLE 3.5
DISTRIBUTION OF RENOVATION EXPENDITURES BY INCOME CLASS: 1985 HOMEOWNER RENOVATORS

EXPENDITURE CATEGORY ($)	ALL (%)	LOW INCOME HOUSEHOLDS (LESS THAN $25 000) (%)	MODERATE INCOME HOUSEHOLDS (25 000 - 50 000) (%)	HIGH INCOME HOUSEHOLDS (MORE THAN $50,000) (%)
Less than $1 000	30.4	39.4	31.7	22.6
1 000-1 999	21.5	18.4	24.5	18.9
2 000-2 999	15.1	12.2	14.7	17.4
3 000-4 999	14.9	12.3	15.5	15.6
5 000-9 999	11.9	11.0	9.4	16.4
10 000 and more	6.2	6.7	4.2	9.0
AVERAGE	$2 989	$2 960	$2 793	$3 352
n=	2 859	659	1 457	843

SOURCE: National Housing Study, CMHC, 1986.

TABLE 3.6
DISTRIBUTION OF RENOVATION EXPENDITURES PER UNIT BY NUMBER OF UNITS: 1985 LANDLORD RENOVATORS

EXPENDITURE CATEGORY ($/UNIT)	ALL (%)	NUMBER OF UNITS 1-2 (%)	3-4 (%)	5-6 (%)	MORE THAN 6 (%)
Less than 1 000	58.5	38.6	58.8	72.2	86.1
1 000 - 1 999	18.9	26.0	13.6	15.4	12.0
2 000 - 2 999	6.9	11.0	8.8	1.0	1.0
3 000 - 4 999	8.3	14.0	7.2	4.5	1.0
5 000 - 9 999	5.6	9.2	8.1	0.0	0.0
10 000 and more	1.8	1.2	3.6	6.9	0.0
AVERAGE	$1 720	$2 041	$2 228	$2 854	$562
n=	393	178	66	34	115

SOURCE: National Housing Study, CMHC 1986.

U.S. Department of Commerce, Residential Alterations and Repairs.

Table 1. Expenditures, By Property Type, Job Category, and Structural Purpose: 1982 to 1986

(Millions of dollars. Components may not add to totals due to rounding)

Property type, job category[1] and year	Total expenditures	Maintenance and repairs	Improvements					
			Total	Additions and alterations			To property outside of structures	Major replacements
				Total	To structures			
					Additions	Alterations		
ALL PROPERTY TYPES								
Total expenditure:								
1986	91,274	35,971	55,303	38,608	7,377	21,192	10,040	16,695
1985	80,267	35,358	44,909	28,775	3,966	17,599	7,211	16,134
1984	69,784	28,894	40,890	27,822	6,007	14,486	7,329	13,067
1983	49,295	18,128	31,167	20,271	4,739	11,673	3,859	10,895
1982	45,291	16,810	28,481	18,774	2,641	10,711	5,423	9,707
Relative standard error, 1986...(percent)	4	5	6	8	15	8	17	4
Heating and central air-conditioning								
1986	6,232	1,860	4,372	974	(X)	974	(X)	3,399
1985	5,096	1,653	3,443	1,121	(X)	1,121	(X)	2,322
1984	5,071	1,722	3,350	959	(X)	959	(X)	2,391
1983	3,714	991	2,723	701	(X)	701	(X)	2,022
1982	3,230	836	2,394	687	(X)	687	(X)	1,707
Relative standard error, 1986...(percent)	7	8	10	20	(X)	20	(X)	11
Plumbing								
1986	8,461	3,569	4,892	1,484	(X)	1,484	(X)	3,408
1985	8,121	3,503	4,617	1,502	(X)	1,502	(X)	3,115
1984	6,919	3,310	3,609	1,201	(X)	1,201	(X)	2,408
1983	3,982	1,684	2,297	557	(X)	557	(X)	1,741
1982	4,258	1,799	2,459	710	(X)	710	(X)	1,748
Relative standard error, 1986...(percent)	6	7	9	16	(X)	16	(X)	9
Roofing								
1986	7,685	3,133	4,552	(X)	(X)	(X)	(X)	4,552
1985	7,497	2,411	5,086	(X)	(X)	(X)	(X)	5,086
1984	5,140	2,014	3,126	(X)	(X)	(X)	(X)	3,126
1983	5,093	1,514	3,579	(X)	(X)	(X)	(X)	3,579
1982	5,105	1,324	3,780	(X)	(X)	(X)	(X)	3,780
Relative standard error, 1986...(percent)	10	15	12	(X)	(X)	(X)	(X)	12
Painting								
1986	11,170	11,170	(X)	(X)	(X)	(X)	(X)	(X)
1985	11,267	11,267	(X)	(X)	(X)	(X)	(X)	(X)
1984	8,817	8,817	(X)	(X)	(X)	(X)	(X)	(X)
1983	6,317	6,317	(X)	(X)	(X)	(X)	(X)	(X)
1982	5,734	5,734	(X)	(X)	(X)	(X)	(X)	(X)
Relative standard error, 1986...(percent)	7	7	(X)	(X)	(X)	(X)	(X)	(X)
Siding								
1986	2,844	1,179	1,665	(X)	(X)	(X)	(X)	1,665
1985	3,165	1,008	2,157	(X)	(X)	(X)	(X)	2,157
1984	2,276	680	1,597	(X)	(X)	(X)	(X)	1,597
1983	2,619	702	1,917	(X)	(X)	(X)	(X)	1,917
1982	2,016	665	1,351	(X)	(X)	(X)	(X)	1,351
Relative standard error, 1986...(percent)	18	22	24	(X)	(X)	(X)	(X)	24
Remodeling								
1986	2,633	(X)	2,633	2,633	(X)	2,633	(X)	(X)
1985	2,618	(X)	2,618	2,618	(X)	2,618	(X)	(X)
1984	2,491	(X)	2,491	2,491	(X)	2,491	(X)	(X)
1983	3,070	(X)	3,070	3,070	(X)	3,070	(X)	(X)
1982	2,688	(X)	2,688	2,688	(X)	2,688	(X)	(X)
Relative standard error, 1986...(percent)	27	(X)	27	27	(X)	27	(X)	(X)
Other								
1986	52,248	15,059	37,189	33,518	7,377	18,101	10,040	3,671
1985	42,505	15,517	26,988	23,535	3,966	12,358	7,211	3,453
1984	39,069	12,351	26,717	23,172	6,008	9,835	7,329	3,545
1983	24,499	6,919	17,580	15,944	4,739	7,345	3,859	1,637
1982	22,259	6,451	15,808	14,689	2,641	6,625	5,423	1,119
Relative standard error, 1986...(percent)	7	6	8	9	15	10	17	14

CMHC, Residential Renovation Overview, Program Evaluation Report.

TABLE 3.1
INCIDENCE AND DISTRIBUTION BY SELECTED CHARACTERISTICS
1985 RENOVATORS

CHARACTERISTICS	INCIDENCE (%)	DISTRIBUTION (%)	NUMBER OF CASES
HOMEOWNERS			
ALL HOMEOWNERS	50.0	100	4 285
REGION			
Atlantic	47.0	9.1	1 024
Quebec	46.9	20.3	696
Ontario	54.3	38.6	749
Prairie	52.2	19.5	1 102
BC	50.3	12.5	714
SETTLEMENT SIZE			
Urban	52.8	74.0	2 665
Rural	47.6	26.0	1 329
ANNUAL HOUSEHOLD INCOME			
Less than $20,000	39.6	15.9	717
$20,000 - $40,000	52.4	43.2	1 773
More than $40,000	57.1	40.9	1 468
AGE OF RESPONDENT			
Less than 40 years	56.1	46.7	1 963
40 - 60 years	50.2	39.3	1 590
More than 60 years	40.5	14.0	609
FAMILY TYPE			
Couple with children	54.6	65.5	2 745
Couple without children	47.1	21.4	869
Other	43.8	13.1	562
DWELLING CONDITION			
Major Repairs	49.2	8.1	363
Minor Repairs	57.7	24.2	998
Regular Maintenance	49.8	67.7	2 816
LENGTH OF OCCUPANCY			
Less than 5 years	54.3	36.2	1 491
5 - 10 years	53.8	24.2	1 044
More than 10 years	47.4	39.6	1 697
LANDLORDS			
ALL LANDLORDS	60.8	100	544
REGION			
Atlantic	51.2	5.5	98
Quebec	59.7	34.5	169
Ontario	61.5	20.1	91
Prairies	66.7	28.1	118
BC	58.6	11.8	68
NUMBER OF UNITS			
1	57.3	21.3	114
2 - 4	63.4	39.8	204
5 - 10	65.2	14.0	73
More than 10	62.6	24.9	134
DWELLING CONDITION			
Major Repairs	61.8	11.9	58
Minor Repairs	70.9	27.4	148
Regular Maintenance	56.9	60.7	323
LANDLORD TYPE			
One Individual	59.8	52.6	92
More than one Individual	69.5	27.4	284
Corporation	56.0	15.5	134
Other	50.0	4.1	22

SOURCE: National Housing Study, CMHC, 1986.

Statistics Canada, 1981 Census of Canada (92-932).

Table 7. Occupied Private Dwellings by Structural Type, Showing Condition of Dwelling and Tenure, for Canada and Provinces, 1981

Tableau 7. Logements privés occupés selon le type de construction, par état du logement et mode d'occupation, Canada et provinces, 1981

Based on 20% sample data - Base sur les données-échantillon (20%)

Structural type - Type de construction	Total occupied private dwellings - Total des logements privés occupés			Dwellings in need of - Logements nécessitant					
				Regular maintenance only - Un entretien régulier seulement		Minor repairs - Des réparations mineures		Major repairs - Des réparations majeures	
	Total	Owned - Possédés	Rented - Loués	Owned - Possédés	Rented - Loués	Owned - Possédés	Rented - Loués	Owned - Possédés	Rented - Loués
CANADA									
Total dwellings - Total des logements	8.281.530	5.141.930	3.139.605	3.943.130	2.378.045	882.675	524.925	316.125	235.630
Single detached - Individuels non attenants	4.735.700	4.216.510	518.185	3.212.900	328.870	737.830	124.895	265.685	85.325
Apartment, five or more storeys - Appartements, cinq étages et plus	748.635	60.520	688.115	54.825	592.400	3.080	88.590	2.615	28.020
Other multiple dwellings - Autres logements multiples	2.581.605	676.355	1.905.250	523.820	1.438.795	113.935	324.380	38.595	142.080
Single attached - Individuels attenants	840.805	430.065	410.740	348.495	307.260	61.990	72.335	19.580	31.140
Apartment, less than five storeys - Appartements, moins de cinq étages	1.338.735	102.345	1.236.395	76.670	938.900	18.640	295.935	7.025	98.580
Duplex	402.065	143.945	258.115	98.655	192.630	33.305	45.110	11.990	20.380
Movable dwellings(1) - Logements mobiles(1)	215.590	188.535	27.050	151.585	18.875	27.720	5.970	9.230	2.210
Newfoundla. - Terre-Neuve									
Total dwellings - Total des logements	148.420	119.695	28.725	91.250	21.905	19.575	4.615	8.875	2.200
Single detached - Individuels non attenants	116.395	106.240	10.155	80.685	7.185	17.450	1.820	8.130	1.140
Apartment, five or more storeys - Appartements, cinq étages et plus	870	5	865	5	690	-	125	-	45
Other multiple dwellings - Autres logements multiples	26.185	8.990	17.190	8.785	13.850	1.580	2.550	825	990
Single attached - Individuels attenants	14.885	7.385	7.500	5.530	5.620	1.310	1.290	540	590
Apartment, less than five storeys - Appartements, moins de cinq étages	7.555	240	7.410	170	6.090	60	1.025	10	285
Duplex	3.645	1.385	2.280	1.085	1.935	205	240	75	105
Movable dwellings(1) - Logements mobiles(1)	4.970	4.460	510	3.795	375	550	115	115	20
Prince Edward Island - Île-du-Prince-Édouard									
Total dwellings - Total des logements	37.660	28.495	9.165	19.875	6.730	5.015	1.740	2.805	700
Single detached - Individuels non attenants	28.145	25.635	2.510	17.825	1.550	5.420	875	2.390	280
Apartment, five or more storeys - Appartements, cinq étages et plus	110	10	100	10	75	5	20	-	-
Other multiple dwellings - Autres logements multiples	7.535	1.170	6.370	785	4.985	280	970	125	415
Single attached - Individuels attenants	2.485	645	1.845	420	1.475	125	225	90	150
Apartment, less than five storeys - Appartements, moins de cinq étages	4.005	180	3.825	115	2.980	55	640	20	285
Duplex	1.045	345	705	230	530	100	105	10	85
Movable dwellings(1) - Logements mobiles(1)	1.865	1.675	190	1.280	120	310	75	90	-
Nova Scotia - Nouvelle-Écosse									
Total dwellings - Total des logements	273.190	195.310	77.885	128.270	55.130	46.610	15.710	20.430	7.045
Single detached - Individuels non attenants	186.150	169.180	16.970	110.305	9.915	40.570	4.430	18.295	2.525
Apartment, five or more storeys - Appartements, cinq étages et plus	11.890	480	11.430	385	9.830	55	1.085	25	435
Other multiple dwellings - Autres logements multiples	60.195	12.100	48.100	7.775	34.395	3.155	9.835	1.175	3.870
Single attached - Individuels attenants	17.335	7.375	9.960	4.850	6.855	1.755	2.235	785	870
Apartment, less than five storeys - Appartements, moins de cinq étages	33.415	1.260	32.155	785	23.575	320	6.175	150	2.405
Duplex	9.450	3.465	5.980	2.140	3.985	1.075	1.430	250	590

See note(s) and footnote(s) at end of table. - Voir note et renvoi(s) à la fin du tableau.

Statistics Canada, Household Facilities and Equipment (64-202).

TABLE 1.12 Dwellings by Type of Repairs Needed (1), by Tenure and Province, May 1988

TABLEAU 1.12 Logements selon le genre de réparations requises (1), le mode d'occupation et la province, mai 1988

Province	Total households / Nombre total de ménages	Major repairs needed / Réparations majeures requises			Only minor repairs needed / Seulement des réparations mineures requises			No repairs needed (2) / Aucune réparation requise		
		Total	Owned / Possédé	Rented / Loué	Total	Owned / Possédé	Rented / Loué	Total	Owned / Possédé	Rented / Loué
	estimates in thousands/estimations en milliers									
Canada	9,244	940 D	633 D	306 D	1,529 C	907 C	623 D	6,775 A	4,237 C	2,538 C
Nfld./T.-N.	166	26 E	21 E	5 F	30 D	23 D	6 F	110 C	84 D	26 E
P.E.I./Î.-P.-É.	44	6 E	4 E	--	8 E	6 E	--	30 C	22 D	8 E
N.S./N.-É.	309	50 E	38 E	12 F	80 E	44 E	16 F	198 C	137 D	61 D
N.B./N.-B.	238	36 D	30 D	7 F	39 E	30 E	9 F	163 C	123 D	40 E
Québec	2,416	245 E	156 E	89 E	320 D	188 E	151 E	1,851 B	1,012 C	839 C
Ontario	3,341	327 D	202 E	124 E	603 D	341 D	262 E	2,412 C	1,566 C	845 D
Manitoba	380	43 E	32 E	11 F	79 D	49 E	30 E	257 C	169 D	88 E
Saskatchewan	358	32 E	25 E	7 F	68 D	47 E	21 E	257 C	182 D	76 E
Alberta	848	76 E	54 E	22 F	142 D	87 E	54 E	630 C	401 C	229 D
B.C./C.-B.	1,145	98 E	71 F	27 F	181 E	110 E	71 E	866 C	540 D	325 E

See footnote(s) at end of Table 2.1 / Voir les notes à la fin du tableau 2.1

TABLE 2.1 Principal Heating Equipment, by Province, May 1988

TABLEAU 2.1 Principal système de chauffage, par province, mai 1988

Province	Total households / Nombre total de ménages	Steam or hot water furnaces / Systèmes à vapeur ou à eau chaude	Hot air furnaces / Systèmes à air chaud		Heating stoves / Poêles de chauffage	Electric heating / Chauffage à l'électricité	Other (3) / Autre
			Forced / Pulsé	Other / Autre			
	estimates in thousands/estimations en milliers						
Canada	9,244	1,577 C	4,585 B	130 E	320 D	2,614 C	18 G
Nfld./T.-N.	166	19 E	42 E	--	31 D	68 D	--
P.E.I./Î.-P.-É.	44	21 D	16 D	--	5 E	--	--
N.S./N.-É.	309	87 D	120 D	7 F	25 E	69 D	--
N.B./N.-B.	238	35 E	77 E	--	19 E	103 D	--
Québec	2,416	316 E	497 D	50 F	86 F	1,458 C	... H
Ontario	3,341	655 D	2,027 C	37 F	82 F	539 D	--
Manitoba	380	44 F	233 D	--	7 F	91 E	--
Saskatchewan	358	46 F	291 C	--	6 G	12 F	--
Alberta	848	167 D	656 C	14 F	7 G	... H	--
B.C./C.-B.	1,145	190 E	626 D	7 G	52 F	288 E	--

(1) Does not include desirable remodelling, additions, conversions or energy saving improvements. See also "Notes and Definitions"
Ne tient pas compte des rénovations, rajouts ou transformations souhaités, ni des travaux d'amélioration en vue d'économiser l'énergie. Voir aussi "Notes et définitions".
(2) Only regular maintenance required./Logements nécessitant un entretien régulier seulement.
(3) Includes cookstoves or ranges, fireplaces, portable heaters, etc.
Sont inclus les cuisinières, les foyers, les chaufferettes portatives, etc.

CMHC, Residential Renovation Overview, Program Evaluation Report.

TABLE 2.4
REPAIR REQUIREMENTS IN THE LOW RISE STOCK:
OCCUPANT-PROVIDED ASSESSMENTS

	MAJOR REPAIRS		MINOR REPAIRS	
	INCIDENCE (%)	DISTRIBUTION (%)	INCIDENCE (%)	DISTRIBUTION (%)
ALL DWELLINGS	10.0	100.0	25.1	100.0
TENURE				
Owned	8.6	58.4	21.5	58.5
Rented	13.1	41.6	32.8	41.5
REGION				
Atlantic	13.8	12.1	24.8	8.7
Quebec	8.6	22.9	24.3	25.8
Ontario	11.1	36.9	25.6	33.8
Prairies	9.2	17.2	25.7	19.2
B.C.	8.6	11.0	24.6	12.6
SETTLEMENT SIZE				
Urban	8.2	56.2	24.2	69.8
Rural	14.0	43.8	22.9	30.2
PERIOD OF CONSTRUCTION				
Before 1901	20.5	18.9	26.9	9.5
1901-1920	20.8	12.4	33.6	7.7
1921-1940	15.6	16.1	30.6	12.1
1941-1960	9.7	25.3	28.5	28.6
1961-1980	5.2	25.4	19.9	37.3
1981-1986	2.9	2.0	12.1	4.7
n=	1 112		2 638	

SOURCE: National Housing Study, CMHC, 1986.

TABLE 2.5
DWELLING COMPONENT CONDITION RATINGS:
RESPONDENTS

	INCIDENCE OF COMPONENTS JUDGED BY RESPONDENT TO BE BELOW MINIMUM ACCEPTABLE CONDITION(1)		
	HOMEOWNERS (%)	TENANTS (%)	LANDLORDS (%)
EXTERIOR		9.2(2)	
Sitework	8.5	-	9.4
Outside Walls	4.4	-	5.4
Roof	9.6	-	11.5
Chimney	5.1	-	5.7
Doors/Windows	9.7	-	10.1
Attached Structures	8.6	-	9.5
INTERIOR			
Finished Carpentry	5.6	11.5	7.9
Flooring	6.8	19.4	10.0
Drywall/Plaster	4.8	14.6	7.6
Wall Surfaces	5.7	15.6	7.3
Insulation	8.8	26.6	12.4
MECHANICAL SYSTEMS			
Electrical	4.0	10.9	6.1
Heating/Cooling	2.5	9.4	4.2
Plumbing	3.9	13.6	7.2
Number of Cases	7 091	2 116	700

SOURCE: National Housing Study, CMHC, 1986.

NOTES: 1. Minimum acceptable condition was defined as a rating of 4 on a 7 point scale from 1 - Beyond Repair to 7 - Perfect Condition.

2. Renters provided only a global exterior condition rating.

CMHC, Residential Renovation Overview, Program Evaluation Report.

TABLE 2.7
INCIDENCE OF SUBSTANDARD COMPONENTS: EXPERTS' RATINGS

COMPONENT	SUBSTANDARD COMPONENTS	
	HOMEOWNER (%)	RENTAL (%)
EXTERIOR		
Attached structures	12.4	7.2
Surface drainage	8.5	6.3
Lot upkeep	2.9	1.0
Exterior foundation (structure)	8.2	3.0
Exterior walls (surface)	10.1	10.8
Exterior walls (structure)	2.7	0.0
Chimney (structure)	7.4	6.3
Doors and windows	12.6	15.0
Roof (surface)	6.0	6.7
Roof (structure)	3.0	2.5
Flashing	4.1	5.5
Soffits, fascia, attic ventilation	10.7	10.7
INTERIOR		
Basement floor	4.3	0.6
Interior foundation walls	5.0	5.0
Joints, posts, beams	6.5	5.8
Waterproofness of basement	9.3	7.5
Insulation	17.3	12.1
Fire hazards	7.0	4.3
Basement ventilation	7.3	8.6
Floors (surface)	4.7	5.1
Floors above basement (structure)	4.2	1.9
Floors above ground	2.4	0.9
Interior stairs	9.7	2.5
Interior walls and ceilings	7.9	8.5
Water entry (1)	18.3	14.2
MECHANICAL SYSTEMS		
Furnace condition	2.5	3.1
Heat distribution system	2.3	2.5
Wiring	2.5	0.5
Electrical system (overall)	2.9	0.7
Water pipes and supply system	4.3	7.4
Plumbing (overall)	3.0	2.5
Bathroom equipment	2.3	2.0
Bathroom ventilation	6.1	4.7
Number of cases	1 276	90

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Not measured on a 7-point scale.

TABLE 2.11
COSTS OF REPAIRS REQUIRED TO BRING OWNER-OCCUPIED DWELLINGS UP TO STANDARD: BY NEED FOR REPAIR CATEGORY

NEED FOR REPAIRS	(n)	MEAN ($)	MEDIAN ($)	STANDARD ERROR OF MEAN ($)
BUILDING EXPERTS				
Major Repairs	352	7 823	5 138	440
Minor Repairs	367	1 616	1 000	101
Maintenance Only	235	1 151	600	142
OCCUPANTS				
Major Repairs	185	6 989	3 700	677
Minor Repairs	251	3 640	2 075	330
Maintenance Only	470	1 818	900	143

SOURCE: National Housing Study, CMHC, 1986.

CMHC, Residential Renovation Overview, Program Evaluation Report.

TABLE 3.17
INDUSTRY OPERATION,
USAGE OF INFORMATION, METHODS OF OBTAINING BUSINESS
AND BUSINESS PLANNING:
1985 RENOVATION FIRMS

	FIRMS USING OPERATING FEATURE INCIDENCE (%)	(n)
INFORMATION SOURCES		
Material Suppliers	95.2	885
Word-of-Mouth	93.0	876
Clients	86.2	795
Trade Publications	79.4	745
Trade Shows	74.6	695
Government Publications	67.6	626
Demonstration Projects	60.3	553
Seminars/Conferences	52.8	488
Training Courses	46.9	431
OBTAINING BUSINESS(1)		
Word-of-Mouth	93.9	925
Yellow Pages	69.6	686
Site Signs	34.4	339
Tenders	33.1	326
Other	16.5	163
Purchase/Renovate	6.3	62
BUSINESS PLANNED/ACCEPTED(2)		
Up to 1 months advance	44.0	423
1-6 months advance	50.6	487
Over 6 months advance	3.5	34

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

NOTES: 1. This method for obtaining business used in 1985. More than one method could be reported.

2. How far in advance residential renovation projects were accepted on average in 1985.

The younger the firm, the more likely they are to use written contracts. Seventy-one per cent of firms in business less than 10 years used contracts more than half the time compared to only 60 per cent of firms in business for more than 15 years. The difference is even more pronounced for the use of written guarantees. Older firms also reported a less frequent use of loan or credit financing than younger firms.

CMHC, Residential Renovation Overview, Program Evaluation Report.

TABLE 3.12
1985 RESIDENTIAL RENOVATION FIRMS,
INCIDENCE AND DISTRIBUTION
BY SELECTED CHARACTERISTICS

	ALL FIRMS (ANY SALES FROM RENOVATION)		RENOVATION FIRMS (MORE THAN 50% OF SALES FROM RENOVATION)		
	DIST'N (%)	NUMBER (n)	INCIDENCE (%)	DIST'N (%)	NUMBER (n)
CANADA	100.0	1 004	66.0	100.0	663
REGION					
Atlantic	3.0	30	44.3	2.0	18
Quebec	22.4	221	58.4	19.6	129
Ontario	28.7	283	73.8	31.8	209
Prairies	25.9	255	68.2	26.4	174
British Columbia	19.9	196	67.9	20.2	133
MARKET AREA SIZE					
Less than 10 000	21.3	214	62.1	20.1	133
10 000 to 99 999	34.5	346	60.4	31.5	209
100 000 and more	44.2	444	72.3	48.4	321
YEARS IN RENOVATION					
Less than 5	25.7	250	71.6	27.6	179
5 to 10	41.5	403	64.3	40.0	259
More than 10	32.8	319	65.8	32.4	210
NUMBER OF EMPLOYEES (full or part time)					
2 or less	22.4	225	66.7	22.6	150
3 to 5	38.0	382	70.4	40.6	269
6 to 10	24.8	249	63.9	24.0	159
More than 10	14.7	148	57.4	12.8	85

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

Statistics Canada, Residential General Contractors and Developers, (64-208).

TABLE 2. Residential Building Industry, Operating Statistics Classified by Type of Work, Canada, 1986

TABLEAU 2. L'industrie de la construction domiciliaire, statistiques d'exploitation, classées suivant le genre de travail, Canada, 1986

Item - Détail	Total	New construction - Construction neuve	Repair construction - Réparations
		number - nombre	
Establishment classification - Classification des établissements			
Establishments - Total - Établissements	19,854	18,757	1,097
Classified by legal entity - Classés suivant la forme juridique:			
Sole proprietorship - Propriétaires uniques	10,399	9,798	601
Partnership - Société en nom collectif	1,120	1,059	61
Incorporated company - Société à responsabilité limitée	8,335	7,900	435
Classified by principal type of construction - Classés suivant le genre principal de construction:			
Single detached - Maisons simples détachées	18,794	17,886	908
Double (duplex, semi-detached) - Maisons doubles (duplex, semi-détachées)	204	188	16
Row housing - Maisons en rangée	184	147	37
Apartments (including triplex) - Appartements (y compris les triplex)	892	536	356
Characteristics of construction output - Caractéristiques du produit de la construction		dollars	
Value of construction output - Total - Valeur globale du produit de la construction	8,370,929,894	8,177,286,251	193,643,643
Detailed by type of construction - Détaillé suivant le genre de construction:			
Single detached - Maisons simples détachées	6,441,220,624	6,311,274,681	129,855,943
Double (duplex, semi-detached) - Maisons doubles (duplex, semi-détachées)	284,820,377	275,903,695	8,716,682
Row housing - Maisons en rangée	223,233,545	217,266,428	5,867,117
Apartments (including triplex) - Appartements (y compris les triplex)	1,051,902,676	1,027,043,550	24,859,126
Non-residential buildings - Bâtiments non résidentiels	328,454,155	304,089,380	24,364,775
Highway, road and bridge - Grandes routes, chemins et ponts	29,679,532	29,679,532	-
Other engineering(9) - Autres travaux de génie(9)	11,808,985	11,808,985	-
Detailed by type of work - Détaillé suivant le genre de travail:			
New construction (including additions, alterations and conversions) - Construction neuve (y compris rajouts, modifications et transformations)	8,069,521,912	8,042,239,292	27,282,620
Repair construction - Réparations	301,407,982	135,026,959	166,381,023
Income statement - État des profits et pertes			
Operating revenue - Total - Revenus d'exploitation	8,548,756,383	8,352,613,549	196,136,814
Construction revenue - Revenus de construction	8,370,929,894	8,177,286,251	193,643,643
Other revenue(8) - Autres revenus(8)	177,820,489	175,347,318	2,473,171
Operating costs (direct) - Total - Coûts (directs) d'exploitation	7,184,091,579	7,032,469,328	151,532,251
Payments to sub-contractors - Paiements aux sous-traitants	3,155,591,123	3,101,873,306	53,717,817
Materials - Matériaux	2,221,550,041	2,189,221,894	32,328,147
Wages(10) - Salaires(10)	644,063,557	616,828,706	27,234,851
Salaries(10) - Traitements(10)	68,569,276	67,142,782	1,426,494
Land - Terrains	824,145,568	821,494,863	2,650,705
Other direct costs - Autres coûts directs	470,082,034	455,907,797	14,174,237
Operating costs (indirect) - Total - Coûts (indirects) d'exploitation	937,808,439	906,256,681	30,751,758
Salaries(10) - Traitements(10)	297,289,924	286,145,628	11,144,296
Bad debts - Créances irrécouvrables	9,817,013	9,560,502	256,511
Financing - Financement	88,913,907	87,585,474	1,328,433
Depreciation - Amortissement	71,970,949	69,338,496	2,632,453
Other indirect costs - Autres coûts indirects	469,016,648	453,626,581	15,390,065
Net operating profit (loss) before taxes - Bénéfices (pertes) nets d'exploitation avant impôts	436,482,813	422,550,988	13,852,805
Profit - Bénéfices	530,063,083	514,370,806	15,812,477
Loss - Pertes	93,680,270	91,720,598	1,959,672
Capital expenditures - Dépenses en immobilisations			
Capital expenditures - Total - Immobilisations	77,271,235	75,313,888	1,957,347
New machinery and equipment - Machines et équipements neufs	26,111,414	25,068,300	1,043,114
New buildings and other structures - Bâtiments et autres structures neufs	51,159,821	50,245,588	914,233
Labour characteristics - Caractéristiques de la main-d'oeuvre		number - nombre	
Hours worked by wage-earning employees - Total - Heures travaillées par les ouvriers salariés	54,076,094	51,735,178	2,340,916
Salaried employees - Total - Employés à traitement	14,996	14,430	566
Direct - Directs	2,934	2,859	75
Indirect - Indirects	12,062	11,571	491

Clayton Research Associates, The Evaluation of the Housing Industry in Canada 1946-1986, Working Paper 1, 1988.

Few Medium-Sized or Large Renovation Firms

There are comparatively few medium-sized or large renovation firms in Canada. There were only 45 firms specializing in either residential repairs or additions, alterations and conversions with revenues of $2 million or more in 1984 - equivalent to only 14 percent of the number of new single-family homebuilders with revenues of $2 million or more.

Firms specializing in residential repairs are typically very small - almost 90 percent of all such firms had total revenues of less than $250,000 in 1984.(13)

NUMBER OF FIRMS SPECIALIZING IN RESIDENTIAL RENOVATIONS AND NEW SINGLE-FAMILY HOMEBUILDING BY SIZE CANADA, 1984

	Area of Specialization		
	Renovation		
Revenues	Repairs	Additions, Alterations and Conversions	New Single-Family Homebuilding*
Under $250,000	3,322	n.a.	n.a.
$250,000-$499,999	308	31	1,260
$500,000-$749,999	80	25	548
$750,000-$999,999	19	33	216
$1 Million-$1.99 Million	20	56	372
$2 Million-$9.99 Million	20	22	271
$10 Million and Over	1	2**	46**
Total	3,770	n.a.	n.a.
Sub-Total $250,000 and Over	448	169	2,713

* Data for firms specializing in single-detached construction are used as an approximation for single-family builders.
** Estimate.

Source: Statistics Canada and estimates by Clayton Research Associates.

Although comparable data are not available on the number of firms specializing in additions, alterations and conversions whose total revenues in 1984 were less than $250,000, an examination of information from other surveys provides some insight into the share of this part of the renovation industry accounted for by very small firms.(14)

National Association of Home Builders, Profile of the Remodeler and His Industry.

Who Does the Remodeling Work: Own Crew or Subcontractor
(percent of respondents)

	Own Crew Only	Subcontractor Only	Partly Own Crew/Partly Subcontractor
Carpentry - framing	71.3%	15.4%	13.3%
Carpentry - finish/trim	75.8	14.4	9.8
Roofing	37.7	41.3	21.0
Gutters	24.4	57.4	18.2
Exterior siding	56.0	22.4	21.6
Insulation	27.6	44.1	28.4
Ceramic tile	14.2	77.5	8.2
Flooring - wood	41.7	45.0	13.3
Flooring - vinyl	13.4	74.3	12.3
Kitchen cabinet - install	55.2	29.2	15.6
Countertops - install	42.1	38.7	19.2
Drywall	19.1	50.5	30.4
Plaster	8.0	83.4	8.6
Concrete - flatwork	25.3	54.4	20.3
Concrete - foundation	27.0	55.6	17.3
Excavating and grading	11.1	74.1	14.8
Brick and masonry	8.6	78.8	12.6
Electrical	6.2	83.0	10.8
Plumbing	4.6	83.7	11.7
Heating/air conditioning	2.6	88.7	8.7
Painting/paper hanging	14.4	63.7	21.9
Active/Passive solar water and space heating	5.9	84.0	10.2

Average Number of Jobs and Dollar Volume Per Remodeling Firm, 1980

	Averages for Firms Doing This Type of Work		Averages For All Firms	
	Average No. of Jobs Per Firm	Average Dollar Volume Per Firm	Average No. of Jobs Per Firm	Average Dollar Volume Per Firm
Kitchen Remodeling	5	$ 36,498	2.6	$18,934
Bathroom Additions	3	16,026	0.7	3,906
Bathroom Remodeling	12	22,244	4.9	9,037
Added New Rooms	6	90,634	3.1	46,733
Finished Attic	2	12,929	0.2	1,455
Added Second Story	3	60,554	0.4	7,758
Finished Basement	2	18,153	0.4	3,971
Enclosed Porch/Garage	4	15,588	1.1	4,141
Added Garage	18	98,422	3.7	19,992
Added Fireplace	7	9,593	1.4	1,889
Roofing	10	39,452	3.7	14,548
Siding	13	42,005	3.6	11,683
Window/Door Replacement	13	14,294	4.9	5,405
Plumbing/Water Heater/Heating or Air Conditioning	9	16,515	1.1	2,064
Active/Passive Solar Space/ Water Heating	3	13,600	0.1	383
Flooring	6	8,980	0.7	1,066
Carpentry	15	42,563	4.3	12,104
Insulation	9	7,239	1.6	1,267
Exterior Work	4	8,134	0.8	1,678
Commercial Remodeling				
Retail	3	66,430	0.7	14,948
Office	4	109,097	0.8	20,797
Wood Stoves	3	11,672	0.4	1,423
Complete Rehab of Res. Units	7	322,099	1.7	78,509
Other	9	95,244	1.3	13,394
Total			44.2	$297,085

Source: NAHB Economics Division